

Ongoing/ Completed Final Year Projects



Faculty of Information Technology and Computer Science

University of Central Punjab

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1. E-Promo

Project Advisor	Faheem Sohail
Status	Complete

E-promo is an e-commerce system which is a bit different from traditional systems, where people just log on and shop and go. The site not only provides the shopping facility but the user can also share its opinion and can also rate the product. It has 3 different roles, and every role has its own duties. E promo has following roles:

- Admin
- Brand Manager
- Customer

For user, E-promo provides rewards after shopping. On e-promo customer cannot just come and shop and go. This reward can serve as concession.

For the business e-promo is not less than ideal place. Brands have liberty to add products, manage products, add discount offers, etc. through e-promo brands can reach to the customer very easily.

Admin is responsible for maintenance and stability of the project he has all the rights related to website.

2. Vehicle Tracking System

Project Advisor	Nabeel Sabir Khan
Status	Complete

Time is very important for everyone in the world that's why people do not like wait for any purpose. There is a large number of people who use public transport daily and they want to keep track of the buses at any given time. In Pakistan there is no system available for public that helps them to find any bus of any transport company at any given time.

The project aims to provide a solution for locating the nearby public transport. This system is enabled for both web services and mobile. The Features of the system are as follows

- Location of bus
- Arrival time of transport
- Speed of vehicle

For location tracking, a mobile phone is used to transmit the data about location instead of GPS tracking unit.

3. Highlights Generation from Cricket Match Video

Project Advisor	Dr. Muhammad Amjad Iqbal
Status	Complete

Automatic highlights generation from cricket match video enables the computer to summarize the video content in such a way that the key events like wickets will be pruned from the full match. This system covers extensive range of image processing algorithms or techniques. This system will enable the user to extract highlights of a cricket match simply by

adding a video to the system and also the output path at which the highlights will be placed. After completing the above task, user will press Generate button to obtain a summary of that match. The highlights will include key events like wickets.

4. Retribution: An Android RPG

Project Advisor	Nabeel Sabir Khan
Status	Complete

The product is an android single player Role Playing Game (RPG). The game will allow user the options of fighting, quest solving, puzzle solving and skill training. The Game is made for android devices having OS 2.2 and above. Using TMX Based maps, which are supported on most of the Mobile and Tablet devices to reach maximum demographics.

Features:

This game will take the user to a medieval era and give user the ability to move around the world map using on screen controls. The game will be in Orthogonal view and will give user the ability to fight with different types of monsters using different types of spells, train different skills, interact with different NPC's, take quests from NPC's and make the character strong by doing these quests. The game will also have a complete storyline which the character will have to complete to end the game.

5. Automated Quran Tutor

Project Advisor	Mr.Nabeel Sabir Khan
Status	Complete

Having memorized the Quran, the hafiz or hafiza must then ensure they do not forget it. To ensure perfect recall of all the learned verses requires constant practice. The hafiz of hafiza often recalls their lesson in presence of another hafiz to point out their oral mistakes. Since the Qari is also a human, there are still chances of mistakes because of environmental factors like noise and attention.

The software is a desktop application that will take word by word voice input of Quranic Ayat and will output results i.e. whether spoken word is correct or incorrect.

6. Flowchart To Code Convertor

Project Advisor	Mr. Muhammad Shoaib Farooq
Status	Complete

Flowchart to Code Converter (FCC) is a desktop application for beginner programmers. Our product Flow Chart to Code Converter (FCC) will get a flowchart as input and convert that flowchart into a high level language code. It will help the students to graphically represent their logic using flowcharts and then verify their logic by the generated code.

Features:

- The main feature of the product is in its name i.e. the ability to convert flowcharts into a high level language code.
- FCC will provide an editor enabling the users to make and edit flowcharts using the tools provided.
- It will also contain basic built in templates which will help the students visualize the flow of the programming constructs i.e. sequential, conditional and looping constructs.

7. Safari Hunt

Project Advisor	Mr. Imran Arshad Choudhry
Status	Complete

Safari hunt is an Ios 3d FPS (first person shooter) game. It is virtual hunting world where the user hunts different wild objects with the help of weapons available in the game. This game turns interesting when the predators tries to defend themselves from character attacks. Whoever is the fittest, survives.

Features:

- The main objective of the game is to entertain the user.
- The game will be addictive and for all agers.
- It allows the user to improve their hunting skills in real time scenario.
- As the user aims to kill any object but fails to kill, the object along its group attacks on user for their defense.
- Character will find the objects and aim it for hunting.
- Character will have limited power in which it has to kill all the objects.
- User has to kill the entire enemies within the given period of time.

8. Automated License Plate Recognition System for Pakistani Vehicle's

Project Advisor	Nabeel Sabir Khan
Status	Complete

Automated License Plate Recognition (ALPR) is a technique which identifies the vehicles by their License Plates. The goal of the research work is to make possible generic approach for all type of Pakistani Number Plates. ALPR can be used in various situations such as maintaining a record of traffic violators, parking lot, ticketing booth etc. Identifying the license plate on any type of vehicle and the region it belongs to, is itself a complex challenge. This particular project focuses mainly on license plate extraction methods which encompass Character Segmentation of extracted plates and then performing Optical Character Recognition (OCR) using different types of Computer Vision Models to classify the numbers and characters. The purpose of this project is to investigate and compare different plate localization algorithms, and to extract and isolate the license plate from the rest of the image. The proposed system will be implemented using MATLAB and C# so it can be compared with previous solutions.

9. Smart Shopping System Using UPC

Project Advisor	Syed Inayat Ali
Status	Complete

The purpose of SSS (smart shopping system) is committed to provide shopping facility to vendor as well as to the customer by using mobile internet at any place. It will enable customer to search and purchase items on mobile without visiting shop physically.

Through this app user will be able to search and order a related brand products or the same product of a different brand, after scanning the UPC (Universal Production Code) of a product that he/she wants to buy.

Features:

- UPC Scanning by Camera
- Decoding and Generating Data
- View Products
- View Previous History
- Search Products
- Order Placement
- Item Management
- Affiliate Management
- Secure Digital Delivery
- Order Processing Cart Manipulation
- Payment Handling
- Shipping
- History management

10. Royal Mart Mobile

Project Advisor	Hafiz Rizwan Iqbal
Status	Complete

Roayl mart is an android based application. It provides a user friendly interface to the clients. This application servers a purchasing channel between customers and marts. The application helps in reduction if problem like time management. The product also provides feature of news feed, through which the customer can always remained link with the new items.

Features:

- Orders Handeling
- Customers,
- Sale,
- Promotions.
- Wish List

11. Virtual Tour Guide

Project Advisor	Faheem Sohail
Status	Complete

The application is a virtual tour guide developed for websites for tourist. Initially some tours will be available at the website so that the user can use it. The rights of arranging a tour will be reserved to admin only. A tour will cover several point of interests that includes the pictures, related videos, history and total numbers of visitors, nearest landmark, education institutes, and recreational areas. Besides information of nearby located landmarks, user will also be provided with virtual Dollars. These dollars will be hidden at several different location. The website only lacks the Gps System otherwise it's more easy and manageable. To overcome the problem a mobile application is also developed with some extra features. The mobile application also facilitate the user if he in-person visit any location, the system will guide user in the form of path and alerts These tours will provide exact path from current location to that tour. Beside this all the relative information in the form of images, video and comments will be shown. Peoples will be provided with virtual Dollars, that are hidden on

the places, if they explore it, will be given to them and they can be converted into tokens. Visitor can use this app on website too. They can register their self to create tours. They can add their stuff and can share it on social websites.

12. Election Management System

Project Advisor	Faheem Sohail
Status	Complete

The current system of identification and count of vote is operated manually. So is the problem of casting vote, as the process of casting, counting, recording, and storing personal information is processed manually. This manual process carries a lot of problems e.g. there is no check and balance of vote count, timing of casting votes is also not followed strictly. Because of manual process many votes are wasted as the person counting the votes cannot recognize the thumb impression.

Election management system is the solution for the entire aforementioned problem this system automates the manual record keeping; it means all the related data is now stored in the database instead of registers, will reduce chances of error occurrence during calculation. It will provides a facility to store and retrieve data with ease. In manual system it requires less time in saving of records and search particular record from the bulk of data so that the legal vote should be casted.

In the manual voting system there were security lapse like no verification of the votes, there were mistakes regarding counting of votes but in this automated system there will be a proper authentication of the voter and the proper verification of the votes will be done through biometric techniques.

- Digital Signature
- Face Recognition
- Finger Print
- Voice Matching
- Iris Matching

In this system the '**thumb impression technique**' and '**face recognition technique**' are implemented.

13. Mystery Atlas

Project Advisor	Mr. Nabeel Sabir Khan
Status	Complete

The product named Mystery Atlas is a 3D Game for iPhone users. This is an interactive simulation game pitting one single human-controlled character against other non-player creatures inside the game world. Our player will possess the liberty to:

- Explore interconnected rooms
- Collect Artifacts
- Fight enemies
- Find its way to the hidden treasure
- Solve mini puzzles
- Discover shortcuts

“Play the game as if it was real” is the most important rule of Mystery Atlas as well as the central design principle. This game has a story which would be articulated to the player in form of video cinematic. Hints and clues would be given to the player in order to maintain the game’s enthusiasm and excitement. The player will have a life threatening experience while finding its way to the hidden treasure.

14. Project Portal Service

Project Advisor	Mr. Nabeel Sabir Khan
Status	Complete

Currently in UCP when students register the project they need to interact with project manager on daily basis, while manager need to compile all the related work manually.

Sometime due to unavailability of any of the member, the process cannot proceed further and has to face delay. In order to avoid the whole problem this project automates the whole process of project management in which each and every step will be worked online. Thus, it eliminates the factor of eliminating time loss or physical presence of student or project advisor or project manager.

Student will also chose the project advised by market expert. The interaction of student to their advisors will also be online. The system will generate alerts for submission of next phases.

One major concern is related to how do project manager provides consistent evaluation of students on different phases and detailed feedback to students and teachers, given an overwhelming number of student project registration and submissions, each of which may consist of over 10 dynamic Web forms, 100 user controls, etc. Clearly, an automated project system is one good candidate solution. It provides many online features to Groups, advisors, evaluators and project managers in order to ease their work and to save time.

15. Posture and Gesture Recognition System

Project Advisor	Mr. Yaser Daanial Khan
Status	Complete

This project incorporates the functionality of identifying complex actions from videos and store them in the database in the form of features. Furthermore, these features are matched with given query video to identify the action. Its primary purpose is to facilitate video retrieval on the basis of action identify and discovery by providing comprehensive features through video segmentation, feature extraction and feature vector organization.

The system recognizes the following gestures:

- Wave
- Clap
- Hand shake
- Hug
- Walk

16. Remote Tracking and Data Safety for Mobile Devices

Project Advisor	Faheem Sohail
Status	Complete

Remote Tracking and Data safety for Mobile Devices (RTDS) consists of various features like remote tracking, data backups, remote lock, Anti-theft etc. RTDS provides a user friendly set of commands or features that are easy to use and at the same time provides sufficient depth and information about victim.

Users after losing their mobile have some questions in their mind Did anyone misuse their personal data? How to get location of mobile? How to get a back-up of their personal data? Wipe data for securing it from misuse? RTDS provides solution for such problems regarding to mobile location, contacts, SMS, and it also wipes data remotely from device.

If RTDS is taken in parent's perspective then these questions come to their mind that: Where are their children? What are their contacts? To whom they are talking via SMS? RTDS will again provide solution to parents regarding their children activities.

17. Anguish an Android RPG

Project Advisor	Faizan Iftekhar
Status	Complete

Anguish is an RPG game for Android users which uses modern game design elements to create a relaxing and pleasurable experience for a wide audience. The players will be able to immerse themselves in an extensively realized fantasy world that is rich with lore, mystery and intrigue.

The game will allow players to

- Delve in the deeply developed story that uses theatrical concepts such as “In medias res,”
- Enjoy exploration,
- Earn experience and improve their characters,
- Develop their unique character using dynamic character skill development,
- Enjoy without fearing the difficulty curve thanks to the Dynamic Difficulty Adjustments,
- Indulge in combat filled with a plethora of spells and magic.

18. Biometric Information System for Forensics

Project Advisor	Yaser Daanial Khan
Status	Complete

Forensic officials faces a lot of problem finding the criminal just when they are given a pencil sketch. It seems a big problem when the images to look into are in hundreds or thousands or even more. This means that one will require to check each single image with the sketch manually. This is a complete task for a team to be working on it for weeks or even months. The whole process is a lot time consuming. Present forensic tools are not supporting in this regard at all. In the current situation the process can just be facilitated by increasing the workforce regardless of any technology used. As the process of identifying the culprit through a sketch is done manually in most of the countries so far, the proposed technique will work as a catalyst in this process and will help the forensics department to narrow down the number of possibilities.

In order to provide a solution to the problem of recognition currently being faced by forensics new approach to automate the review process based on techniques of image analysis. The general approach is to use the sketch images to find the images of the nearest possible match

present in the pre-populated database of images consisting of criminals or just people in groups in their daily routines. The mathematical computations on images to find the features help us in identifying the characteristics and features of the face. The dataset stored is pre populated by having all the feature values stored into database for fast retrieval.

19. Interactive E-Book System

Project Advisor	Yaser Daania Khan
Status	Complete

Interactive E-book is a system of gesture recognition but it enables its user to turn over the pages of a pdf or word file without any mouse control.

This system recognizes 8 different gestures.

- Hand left,
- Hand right,
- Up,
- Down,
- Zoom in,
- Zoom out,
- Single click
- Double click.

One of main feature of this system is to open and display E-book. User can open any E-User simply has to perform the desired hand gesture to perform its desire task.

20. Software Defined Radio

Project Advisor	Imran Arshad Choudhry
Status	Complete

The product will allow users to adjust the transmitter power on which the SDR will operate. The users will be allowed to shift between the modeling techniques provided by this SDR just by selecting an option from the list. This will provide radio communication (sending and receiving) to the users and transmit signals on a large range of frequencies. The system will also implement a simple mesh network by transmitting and receiving vice following mesh model. This system will also implement a simple encryption technique on AES standard.

21. Brain Tumor Detection And 3-D visualization

Project Advisor	Dr. Muhammad Amjad Iqbal
Status	Complete

An automated brain tumor detection process and a 3D model of brain will assist a doctor to visualize or perceive tumor. It can also help the doctor to make better decisions in shorter time to diagnose a tumor more accurately and may save cost and precious human lives. A 3 dimensional can give clearer picture of the tumor and doctor can see the tumor from multiple angles to judge the perimeter and severity of the tumor. So it will be a challenging problem to construct 3-D model of the brain after detecting tumor. Brain tumor detection is a challenging task and an important research question. States of the art are going to be developed in the world to make this task easy.

Detection Accuracy is increased by applying new techniques of Artificial Intelligence. In this system we apply diversified knowledge. Mathematics, Probability and Statistics are also

applied as it enriches the knowledge and experience. The proposed system is both developmental and research based.

Life of the patient is precious. If the tumor is identified lately then it increases the death rate. 3D-Model will help doctors to perceive the intensity of tumor. Our system may be helpful for both doctor and patient. It saves time of doctor and life of patient. 3D-model of the brain will help the doctor in surgeries. 3D-Model will help the doctors to analyze brain and tumor at the same time. For completion, a GUI desktop application will be developed that will run easily on second generation computers.

22. A Robust Speech to Text Conversion Engine for Video Lectures and Conferences

Project Advisor	Yaser Daania Khan
Status	Complete

Most of universities rely on textual format to share lectures with student and mostly lecture are available online but still students waste their lot of time on taking notes during the lecture and are unable to focus on lectures. Our final product provides the solution to student by taking input in the form of videos and provides the textual information from the lectures. ASR systems are cost effective to deliver. Mostly current system does not work more efficient as they should. So, main target of this research is to provide efficient system for student's facilitation.

23. Design through Class Diagram: A Pedagogical Tool

Project Advisor	Muhammad Shoaib Farooq
Status	Complete

The existing tools of the domain of automatically translating a UML class diagram to actual source code and vice versa are tailored for professionals. A novice cannot use these tools for learning purposes as they already require the user be familiar with the design techniques and the tool itself. This tool would translate given UML class diagram to source code and reverse engineer given source code to class diagram interactively, representing the result in a novice-friendly way and the in-built feature of drawing UML class diagrams would be specially designed pedagogically to help beginners improve their skill. The software tool would be able to generate source code from given UML class diagram and reverse engineer given source code to class diagram. It would use a wizard-driven approach to draw class diagrams itself just by asking the structure of diagram from the user in context of teaching syntax of class diagram to the user.

The primary product features are:

- Drawing of UML Class Diagrams
- Generation of Source Code from Class Diagram
- Generation of Class Diagram from Source Code

24. Distributed File System

Project Advisor	Muhammad Shoaib Farooq
Status	Complete

The task of project is to develop a distributed file system (DFS) which support the sharing of information in the form of files and hardware resources. In DFS, file system is responsible for the organization, storage, retrieval, naming, sharing and protection of files. File system in DFS provides all the transparency (location, access, concurrency etc.). In past, there were problems of sharing files using the sneakernet and FTP method. Through distributed file system, simple application program fetch the file we needed and then uses it locally. The project is Client-Server based “Distributed File System”. Project consists of collection of certain number of autonomous, dispersed but interconnected computers via communication path that appears to the user of the system as a single computer.

25. Emotion Recognition by Facial Expression

Project Advisor	Yaser Daania Khan
Status	Complete

Facial emotion recognition plays a vital role when it comes to developing multi-cultural visual communication systems for emotion translation between cultures. Computers and robots are being used widely for betterment of our daily life therefore it is important for computers and robots to have an artificial mind that would enable them to communicate with human beings using both logical and emotional information. The emotion recognition system has been a significant field in human-computer interaction. It is a considerably challenging field to generate an intelligent computer that is able to identify and understand human emotions for various vital purposes, e.g. security, society, entertainment. Many research studies have been carried out in order to produce an accurate and effective emotion recognition system.

This System is proposed to design a real time monitoring systems, capable of evaluating four basic emotions i.e. happy, sad, angry and neutral. The implementation of these systems will represent the realization of an important goal for the security industry, the automation of real-time prediction of human behavior and intention. [2] If any company makes a funny/sad advertisement and they are not sure their advertisement is up to the mark. The implementation of such systems will help them to find out their advertisement is ready or not for market arranging test run by showing their advertisement to different sets of people.

26. Image Retrieval Search Engine

Project Advisor	Yaser Daania Khan
Status	Complete

The software application takes an image as query and extracts the visual feature such as color, shape, and texture and matches them with other images in the database. Using comparison and matching algorithms, shape, color and texture features of an image are compared and matched to the corresponding features of another image. The similarity between images, matches through the Content Based Image Retrieval (CBIR) algorithms. A CBIR system gets a query from user, whether an image or the specification of the desired image. Then, it searches the whole database in order to find the most similar images to the input or desired image.

27. Iron Roller

Project Advisor	Muhammad Bilal Arshad
Status	Complete

This project is to develop an android game that will use the accelerometer for controlling the ball with 2D effects. This game will be entertaining for the user with different obstacles and bonus for ball. This game will be developed in AND-Engine having a lot of fun factors and will be a great launch in mobile gaming. Following are some features of the game

- Uses the android accelerometer functionality.
- This game has the dynamic leveling i.e., difficulty of every level will be changed according to the level of user that how is user playing the game.
- In each level obstacles and bonus are changed.
- If Iron Ball collects all coins and complete the level in 1st attempt user will get extra life.
- If Iron Ball touches the fire or bomb user will lose his life.
- When Iron Ball reaches its destination, next level will launch.
- Whenever user clears the stage or loses the life his score is uploaded to leader board
- Website will be launched.
- Each user will have his/her profile on our website
- There will be an integration of social network.
- Leader board will also be maintained through Score Loop.

28. Moto Thrill

Project Advisor	Muhammad Bilal Arshad
Status	Complete

"Moto Thrill" is a game that will be developed for iPhone. The concept of this game is to develop a thrilling and exciting game for car lovers. The main focus of this game will be to provide user an exciting path where the car will start and finish its journey. Some of the game features are:

- Game will have three modes. Career mode, Quick race mode and Skill mode.
- Players will be scored on the basis of their performance (distance covered and obstacles cleared in given time limit).
- New cars will be unlocked by each passing stage.
- Unlocked car will be available to be bought by the points earned.
- Players will be able to compete with local scoreboards (single player at a time will play the game but multiple users can register on same device)
- Car will have to pass obstacles/hurdles.
- One on one racing stage against computer after a certain number of stages cleared.
- The car can cast a ray/laser to destroy stones that will fall on the road

29. Personal Music Studio

Project Advisor	Yaser Daania Khan
Status	Complete

Personal Music Studio (PM Studio) is a simplified digital audio workstation (DAW) based on the Android Operating System. By using PM Studio users will be able to create their own songs by utilizing various virtual instruments, mix multiple tracks and share their creations with other users online. The application has the following features:

- Two modes Learning mode and Basic mode

- A piano based layout
- Various virtual instruments are available for the user to choose from
- Recording of vocals over a completed track
- Mixing multiple tracks
- Sharing tracks with other users on the go

30. Revenge of Corpses

Project Advisor	Muhammad Bilal Arshad
Status	Complete

REVENGE OF THE CORPSES is a top down shooter and zombie survival game for android. It has a deep story and action oriented gameplay. The game's story will span over multiple levels. The game will give entertainment to user with different stages having different difficulty level and fights with their enemies (creepers and zombies). It is an android game and will be made using AND engine.

The game have following features:

- Game will have 5 story based levels.
- Our game will have the following weapons:
 - Pistol
 - Rifle
 - Shot gun
 - Grenade
- Multiple Zombie types
- Zombies will have a vision and if player is within the visibility range then the zombies will start running towards the players at fast speed to attack.
- New weapons will be unlocked by each passing stage.
- Players will be able to compete with local scoreboards
- Player will have to solve puzzles.

31. Social Networking System

Project Advisor	Yaser Daanial Khan
Status	Complete

Social networking system is a web based project. It will provide people a platform where they can communicate with one another and it is the best way to get in touch with your friends and you can share your pictures, you can send messages and you can make your own community within your profile. This system will help you find your old friends. You can also use this system as an advertisement by making your own page. The best part of the design is that you can adjust your main view of the profile within by selecting any one of the three given views i.e. you can have the different views for your friends, family, and office and an another interesting feature that you can have different themes for your profile, can set a background of your profile of your own choice.

Basically this social networking system will provide all the features that an existing networking system has and it will be more user's friendly.

32. Resource Sharing In Android

Project Advisor	
Status	Complete

Resource Sharing is a computer and mobile phone software for the remote control access, desktop sharing between Android Phone and laptop/computers. The software operates with the Microsoft Windows and Android operating systems. While the main focus of the application is remote control of Android Phone from laptop/computer and some additional features are also included.

The main focus is to develop a handy application for the users of android through which they can get the benefits of sharing multiple resources like

- Screen sharing
 - Streaming on Large Screens
 - Share Screen in Read Mode
- File sharing
 - Documents
 - Music
 - Videos
 - Images
- Video/Conference Calls
 - Instant Messages (IMs)
 - Video Conference
 - File Transfer

33. V-Teacher Assistant

Project Advisor	Nabeel Sabir Khan
Status	Complete

V-Teacher Assistant is an alternative to the human TA system offering a lot more features and flexibility compared to the human teacher assistant model and unbiased results in the end.

The end product will allow the software users to:

- Manage staff, students and courses
- Keep an eye of students performance
- Manage course resources
- Automatic evaluation of assignments and quizzes
- Individual profiles
- Email notifications of important events
- Automatic result posting on university network

34. Home Automation System

Project Advisor	Liaquat Majeed Sheikh
Status	Complete

Home Automation System provides home security to the user in an effective way. An advanced security system based on the android platform, a hardware controller and web application, which will track the home, office electrical appliances. This application will allow the user to monitor the lights on, with a single text message. The hardware is connected to the server so all the information will also be passed to the server and android application. The hardware chip is designed in such a way that it will be controlled by GSM Module and it will be installed with the switchboard of your home/office appliances. GSM module performs the required tasks through sending text message, web server and android application. GSM module database provides authorization to the user and contains the log of the appliances.

35. Auto-Annotation Based Virtual Image Gallery

Project Advisor	Nabeel Sabir Khan
Status	Complete

An image gallery will be developed for the completion of the project. This image gallery will be designed in a way that it can automatically annotate the images making the retrieval of images easy. **Automatic Image Annotation** (also known as Automatic Image Tagging) is a process in which system automatically assigns metadata/caption to image based on the content. Annotations will be assigned to images by **recognizing the objects** in the images. Annotations will be stored in database for retrieval. User will be writing queries in **Natural Language**. The developed software will transform it into Query Language. This system will help people to retrieve images by queries rather than by searching manually. Image search will be based on annotations assigned by the system by **recognizing the objects** in the image rather than on the metadata of image.

Tools:

The System will be operated in windows 7/8 and Linux.

.Net Framework is required for the system

36. Chemical Reaction Simulator

Project Advisor	Imran Arshad Choudhry
Status	Complete

The idea of the project is to develop the “Chemical reactions simulator application” for personal computers, it is an educational tool which allows a person to introduce different chemical components to each other and observe the reaction without having to obtain any sort of chemicals or tools in real life. This can be done through already defined tutorials or the user can mix his/her own chemical combination, and see what happens.

Software needed Windows XP or above, Linux, Mac OS all running JVM with SQL Server at the back end

37. Constraint Based Scene Generation System

Project Advisor	Nabeel Sabir Khan
Status	Complete

The constraint based text to scene generation enables a user interactive scene generation according to the text entered into the 3D space. This software expects text from the user and this text is processed through a natural language processing module. This separates the important key information within the text and tags them accordingly so that it can be formed into a dependency structure before utilizing those words for catching up the attached dictionary and models along with it. This product can benefit all the criteria that are used in the areas where scene generation is required, such as in architecture, storytelling and character designing.

The proposed environment requirements are as follows, The System would be operated in windows 7/8 and Linux. Python would be the integral part of the system's semantic interpreter, it can be used as a third party installer or one can simply use Linux. The Java JDK and JRE would be required as well because the system might be opted out into the Java, this would propose a relative ease to integrate the 3D engine for semantic representation phase. The 3D space would be implemented in UNITY 3D engine. If necessary the System would be tested upon windows XP and other working operating systems

38. Cosmic Lords: A Cross-Platform Social Network Game

Project Advisor	Shahzad Hemani
Status	Complete

Cosmic lords is a galactic themed cross-platform social RPG games in which player develop their planets by building space ships and strengthening their forces to attack and conquer other planets, so they can increase their lordship.

Our game allows players to play along with friends and other players on the social network and have fun competing against each other in a galactic war to achieve absolute power.

The game incorporates the following attributes:

1. It is a social RPG game with an isometric view.
2. Develop in **cocos2dx** game engine which is a cross-platform game engine for all the major mobile and desktop platforms.
3. The game uses cocos2dx to interface with the users **I/O and GUI**.
4. Unique war simulation with realistic units & buildings and world at arms.
5. Strategic battles among planets and their lords, to widen the area of their Cosmic lord Ship.
6. Battle against or ally with players from all over the world online.
7. Do In-game tradeoff resources.
8. Connect with your friends through Facebook and engage their planets in arms.
9. Share your ranks and achievements on the social network.
10. Employ **soPlay** heuristics in design and evaluation of the game to achieve a high quality product that has all the characteristics of a professional level game.

Tools:

- **cocos2d-x** game engine
- **ASP.net**

39. Data Structure Simulator

Project Advisor	Muhammad Shoaib Farooq
Status	Complete

Data structure simulator is a learning tool. It will provide help users to learn and understand Data Structures in simple easy and attractive way. It will also provide help to teachers to teach DS by showing their working visually. This simulator will cover all main stream topics of data structures e.g. Linklist, Stack, Queue and trees include BST, AVL and Red and Black trees.

40. Dragon Fragon

Project Advisor	Imran Arshad Choudhry
Status	Complete

Dragon Fragon is a 3D android based game where User will enjoy a 3D environment on its android smart phones by playing it.

The major features of Dragon Fragon are:

- User in this game is as a dragon.
- User will attack enemies using different fire flame
- Enemies are not dull characters, they can protect themselves
- Difficulty level will be increased on clearing each stage
- It is a multi stage game(minimum 3 stages)
- 3D gaming environment
- User can move it's character using gyroscope
- User will get mystery boxes
- User profiling
- User will have health bonus
- User can choose different fire flames according to the situation
- User can see high score of game using android game center
- User can upload it's score on facebook profile
- User can save its current game for future play
- User can play, pause and restart the saved game
- User can see enemy fires in back screen

Tools:

- Android SDK,JDK etc
- Unity 3D environment
- 3D max
- Photoshop (cs6)
- Core i5 with the AMD Radeo HD 6450 Graphic card.

41. Greenhouse management and controlling system

Project Advisor	(Adnan Ghafoor)
Status	Complete

The product is a hardware based solution to control the environment within a greenhouse artificially. It involves intensive sensing of the atmospheric and climatic conditions. The procedures will be regulated using a microcontroller. Also Internet via GSM can be used to screen and control the environmental parameters remotely. The main purpose of the product is to sense, monitor and control the temperature, humidity, irrigation, fertigation along with making logs of the inputs and outputs.

Our product will be monitoring and controlling environmental variables of the greenhouse like

- Soil temperature
- Air temperature
- Humidity
- Luminosity
- Soil moisture
- CO₂
- pH

All of the above will be monitored remotely. To prove and demonstrate the concept we will be doing this using the Ethernet at first. If everything goes according to plan and is catered properly we will add more sensors and will replace Ethernet with a GSM modem.

Hardware Requirements:

- Arduino Mega 2560 R3 16Mhz
- 1GB storage card for logs
- Internet connection of at least 256 KBPS
- 12 volts 2 ampere electricity supply
- Compatible sensors

Software Requirement:

- Browser on PC to access the website
- Mobile Browser to access the website on the go
- Interfacing driver if in debugging or reprogramming mode

42. Mongol Invasion

Project Advisor	Shahzad Hemani
Status	Complete

Mongol invasion will be a 3D tile based, real-time strategy, multiplayer game developed for the Cross platform. Each player will start with a base and with initial resources to fight against the Mongol horde (AI) arrives

- Game has three modes. Career mode, Survival mode and co-op mode.
- Player will be scored by killing the enemy and getting the coins
- New upgrades unlock by surviving each level of wave.
- New maps will unlock by earning points (Money).
- Players will be able to compete with local scoreboards (single player at a time will play the game but multiple users can register on same device)
- Player has to kill the enemy in order to complete the wave.
- Multiplayer mode two players see the same map and make more score to win.
- Players would have different weapons and siege engines to restrict the enemy

The game will be playable on Cross platform and game developed using:

- Unity 3D
- . Models are designed using:
 - 3D Max
 - 3D Maya

43. Parking Assistance System

Project Advisor	Mohsin Abbas
Status	Complete

To avoid parking problems organizations use automated parking systems. A new parking system is purposed for parking assistance. This system uses each sensor to count free parking space and displays the number of available parking slots using dot matrix LED display. By using this technique efficient parking assistance system will be produced.

Features of Parking Assistance System are following.

- IR sensors.
- Wireless sensors.
- Easy to configure.
- Display Board.
- Central Device Integrated with Computer.
- Slot counter.
- Slot indicator.
- Software Application
 - Brief Parking History
 - Counter Handling
 - Neared Parking Slot

44. Pocket Learning

Project Advisor	Nabeel Sabir Khan
Status	Complete

The project enables a personalized learning experience.. It will also manage instructor online courses and provide real-time information updates via notification. All lectures from the respective teachers will be uploaded and students will be able to download the video lectures of the registered subjects. Representation of Classroom Virtually. The major features of this project are live video lecture facility, two way streaming between instructor and students, Multi Tab view, online quizzes, text chat and raise a hand option, uploading and extraction of resources.

For the moment the system will be compatible with Intel chipped computers running Windows

Vista and up with the .NET Framework 3.5 installed and for the hand held devices the system will be compatible with the devices running android 2.0 and up.

45. Porto Build

Project Advisor	Muhammad Shoaib Farooq
Status	Complete

Portobuild is an online platform that helps the user present its work perfectly. With Portobuild account, user can create great websites, perfect portfolios and galleries in a flash. Start by uploading the work and easily organize it and select the Look and feel. Seconds later the user can have professional presentation. Portobuild is fully flexible, through selection of work, user can create websites, portfolio pages and albums. User can easily customize color, fonts, and layouts and enrich your media with various social and selling options.

When the user is done with the requirements, the work can be shared with clients , friends and the online community. The user can take the work around. Porto Build perfectly well on hand held devices.

Theming, User Interface (UI) and User Experience (UX), Portfolio item sharing, searchability, connecting or following others, RSS, delegation, asset management, assets versioning and security are main working areas.

There are similar platforms available. The aim is to simply gather all work related together at one place with some added features and improvements.

46. Smart Game Controller

Project Advisor	Muhammad Bilal Arshad
Status	Complete

The aim is to provide a complete, effective and efficient game controlling solution to the users through application. This application provides a similar interface to that of a physical game controller. Plus it provides additional functionalities, such as remote keyboard, mouse and slide changer.

Following are the video game console related features provided by Smart Game Controller.

- **Complete replica of standard Joypad on android.**
- **Customizable Joypad.**
- **Racing games Joypad using phones accelerometer.**

Apart from gaming there are some extra functions like:

Text input options

A virtual key board will be displayed on the phone and user can insert a text into the editor on the PC's side.

➤ Cursor control option

User can navigate the cursor through phone on a touch pad and contain buttons, associated with a standard mouse.

➤ Slide Changer option

User can easily navigate the slide show through this application. Plus the user can shut the slide screen dark and reappear it whenever he/she desires.

Smart Game Controller would require smartphone which are compatible and are equipped with android 2.3 or higher to run. Plus jre7 should be installed on computer to run the server.

47. Smart Phone Based Remotely Controlled Video Surveillance Rover

Project Advisor	Adnan Ghafoor
Status	Complete

The product (**Smart rover**) will be a **4WD rover** consisting of an **ultrasonic sensor** (Sonar sensor), **Arduino ADK microcontroller** board based on **ATmega 2560** and a **Smartphone** having android OS version greater than 3.0. The microcontroller and Smartphone will communicate via **serial interface**. The rover will be remotely controlled over the internet with a **web server** placed in between the **client** and the rover. Server will receive the directions of the rover from the client and will forward it to the Smartphone placed in the rover. The Smartphone will forward these directions to the microcontroller.

Smartphone will perform **video surveillance** by streaming the live video back to the server, which will then be forwarded to the client by the server. On **Autonomous mode**, the source and destination locations will be get from the client and the server will use **Google map API** to find the directions from source to destination. After getting and

analyzing those directions the required path will be send to the Smartphone, which will be forwarded to rover. Rover will start moving according to the given directions by **avoiding itself from hurdles** and meanwhile server will start tracking the rover location on the basis of **GPS** coordinates which will be sent from the Smartphone.

Tool;

Client side application:

Java platform required. Minimum JDK version 1.5

Server side application:

Java platform required. Minimum JDK version 1.5

Mobile side application:

Android OS. Minimum version 3.0

Embedded system:

Microcontroller:

Name:	ATmega2560	R3
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Operating Voltage :12V

Flash Memory:	256 KB	of which	8 KB	used by boot loader.
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SRAM:	8	KB
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EEPROM:	4	KB
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Clock Speed: 16 MHz.

Ultrasonic Sensor:

Name: Parallax PING

Object detection distance: 0.75 – 120 inches (2cm to 3m)

48. Social Networking for University Campuses

Project Advisor	Nabeel Sabir Khan
Status	Complete

Social Networking system is a detailed mobile and web based application. The main features of campus social network system are to support online communication, sharing and collaboration in learning, teaching and research activities of campus users. The Social Networking system features include:

- An interactive environment for teachers and students
- Online communication
- Sharing and collaboration in learning
- Teaching and research activities of campus users
- A single platform for different university students
- Video conferencing and chatting
- Information regarding different universities and updating
- Creating user profiles
- Help students choose their courses, projects

Windows operating system with Intel chipped processors and .NET framework 3.5 installed for the web based system. And for mobile based devices the system will be compatible with devices running on android 2.0 operating system and onwards.

49. The Last Man

Project Advisor	Imran Arshad Choudhry
Status	Complete

The Last Man is a 3D game designed for android operating system. It provides 3D environment to the user that allows to play in a realistic environment. Players are allowed to play the game using GUI buttons.

The features of **The Last Man** game are following below:

- Diverse bits and pieces are in the game
- Some are alien characters
- Some are dumb cars characters
- Some are artificial Intelligence
- Difficulty level increases as the player goes deeper into levels
- Use weapons for objects
- Use ammunition pickups

This game is for android version. A TPS (third person shooter) game developed using:

- Android SDK
- Unity 3D

. Models are designed using:

- 3d Max
- 3d Maya
- Poser
- Zbrush

50. VDI in a Globe

Project Advisor	Muhamamid Shoaib Farooq
Status	Complete

Product

The idea of product is to develop a management console that will provide communications between the multiple hypervisors in Virtual desktop infrastructure .A management console has following components

- 1) Hypervisor
- 2) Server
- 3) Client
- 4) Managements consoles

The main function of a managements console is to provide communication between different hypervisors .The management console that we are developing will solve the heterogeneity problem in a sense that majority VDI solution providing companies in the market provides a support for single hypervisor and the person is bound to use only that hypervisor .The management console that we are developing will resolve this difficulty and will provide communication between the multiple hypervisors .

The management console allows to handle different servers through a GUI unit .It also provides the facility of creating virtual machines on the servers to handle multiple operating systems. The management console also provides communication between different hypervisors and gives a degree of choice to select an operating system of desired choice on runtime.

51. C++ Programming Environment for Novice Programmers

Project Advisor	Dr. Adnan Abid
Status	Complete

The aim is to develop a programming environment which will help novice programmers to learn programming and algorithmic thinking using following ways

- Drag and Drop Programming
- Flow Chart to Code Generation
- Programming Editor

52. Cloud based ERP Solution for Furniture Showroom

Project Advisor	Kamran Shabbir
Status	Complete

The product will be developed for an ERP based Solution for a Furniture showroom using SaaS cloud based technology. This system would be managing all the core business processes of the showroom from furniture placement from factory to furniture delivery to the customer. Cloud services will be provided via an internet server that would automate their complete business process in an effective and efficient manner while cloud infrastructure will be used and benefits to fulfill the needs of customer.

Our Software will cover all the core business processes that participate in successfully running a furniture showroom. We would be managing the following sectors of the organization for them

- Human Resource
- Retail Management
- Customer Relationship Management
- Inventory Management

Cloud supports client-server architecture so we would need following resources on client and server side.

Server side:

- Application servers.
- Database systems (using Cloud SQL, Cloud storage and BIG Query).
- Computer network.
- Server operating systems.
- Software licenses according to project requirements.
- Web servers.
- Backend programming languages and frameworks.

Client side:

- Intel Core i5 processor based computer.
- Mobile app (android version 2.0 up to current version available in market).
- Browser (using Internet Explorer 10/Google Chrome).
- Software licenses according to project requirements.

53. Document Retrieval System

Project Advisor	Dr. Adnan Abid
Status	Complete

Various methodologies have been developed for retrieving information but the increase in the collection of documents, and their sizes led to an efficient system to process the data. This project aims to develop a desktop based application system, which will enable users to get relevant information from any repository of the computer hard drive. This system will be based on an information retrieval system, where an architectural design and implementation

of the system will be made to process large collection of data on the basis of user given query and will generate a set of relevant documents by adopting search engine methodologies that will be ranked on the basis of its relevancy.

54. DragDrop-Java

Project Advisor	Farah Naaz Raza
Status	Complete

The project aims to create an interactive, error free and self-pedagogical GUI environment by giving a pick and drop based interface for Java statements. It will make it easier for any age group to solve problems using Java. It will also help instructors by eliminating the issue of syntactical debugging that novice programmer's face.

Objectives:

1. It will be a great help to amateur programmers of all age groups to focus on solving the problem rather than worrying about the syntax.
2. Reduce learning graph of Java by providing bug free mode of coding and an engaging graphical out layer of Java.
3. A pick and drop, block base interactive graphical environment to solve computing problems in Java.
4. The GUI will provide:
 - Beginner mode where students will not have to deal with syntactical errors. They will use lego block like instructions to build a program. Build option will compile and run the program.
 - Advance mode where programmers can handle the errors themselves and build the code. This will be done by generating editable code for the dropped blocks.
 - Dialog box based Wizard help will be provided to facilitate students in figuring out the block based code. It will help students program by asking them to select choice of commands and enter their values.

55. Intelligent Video Surveillance System

Project Advisor	Armghan Shahid
Status	Complete

The project idea is to develop such type of video surveillance system which will be fully capable to check and notify about any abnormal behavior in any the desired place by making our system artificially intelligent to learn from the environment.

The system is capable of learning in any environment where the camera is installed, by focusing on human activities.

Tools Used:

Visual studio

Matlab

56. Interactive Voice Response System

Project Advisor	Rana Adeel
Status	Complete

In the normal recruitment process it's not necessary that interviewee is available at the same time as the interviewer plus in the current scenario of unemployment there is always an overwhelming response for any job placement which becomes very difficult for any HR/Recruitment department to scrutinize and filter the candidates after having personal interview.

The solution lies in the proposed system which as:

- To develop an Interactive voice response system.
- To develop a Web based application for the IVR to place the Voice Questions.

Tools:

- Visual Studio 2012
- SQL Server 2012

57. Plagiarism Detection in Urdu Language

Project Advisor	Dr. Adnan Abid
Status	Complete

A plagiarism detection system will be developed which will intend to solve different types of plagiarism techniques to detect plagiarize document in Urdu language.

Corpus (set of documents) will be collected and by using that dataset the score similarity between pair of documents will be computed with the help of general algorithms. After that the quality of detection of plagiarize document will be tested.

58. Play n Learn

Project Advisor	Dr. Muhammad Humayoun
Status	Complete

Play n Learn is an android application for children up to five years.

This application facilitates learning in children and allows parents to test their children's learning through the application. This application also allows the parents to develop new practicing scenarios to improve learning their children. This application keeps profile of kids and records result of the tests taken by the kids and show their standings among all the application users worldwide. The application has two modes child and parent. The child mode has four learning modules, four test modules and a practicing module. The parent mode allows parent to design quizzes and practice scenarios and view standings of child among all users.

59. UCP BOOK

Project Advisor	Zeeshan Ali Ran
Status	Complete

This website and the application are intended for UCP students only. Ucpbook allows the students to socialize with other university fellows and maintain their privacy at the same time. Ucpbook provides most of the features which are available on popular social websites such as:

- Home page feature called news feed
- Friending (Send friend requests to people you know)
- Messages and inbox
- Groups

- Give feedback by liking or comment or share something
- Chat messenger with group chats
- Upload photos/video and apply digital filters to them
- Notifications
- Platform to keep in touch with alumni
- Questions and answers corner
- Verified accounts
- Locate friends inside university
- What's up UCP (News about all societies, events, happenings and everything inside the university campus)

60. Android Restaurant Order and Management Service

Project Advisor	Zeeshan Ali Ran
Status	In Process

Android based application “Restaurant Order Management System” (**AROMS**) which:

- Automates the placement of an order
- Facilitates serving of an order
- Facilitates preparation of an order
- Helps to complete the billing process
- Manage food inventory

61. Tool For Database Design

Project Advisor	Armghan Shahid
Status	Complete

The project basically provides tools for the Database Design with which a user creates relational databases. The project illustrates on the conversion of ERD (Entity Relationship Diagram) into the relational mapping and then automatically generates its SQL and has reverse engineering capabilities. We are also providing a feature of ODBC (Open Database Connectivity) which is a standard C programming language middleware API for accessing database management systems (DBMS). Furthermore, it will give user an option to generate SQL in Oracle, My SQL and also Access, SQL Server(optional) or apply live updates if there is any changes. The User has the right to choose database on its own. It will keep the relationships intact taking in account all the database management rules.

62. Social Media Mining

Project Advisor	Dr. Abdul Aziz
Status	Complete

Social networking sites provide a unique opportunity of access to huge amount of unstructured data coming from various demographics. If utilized properly, this data contains wealth of information that can help decision makers make informed decision. The goal of project is to provide one such platform that can gather data from different social networking sites, process it, extract meaningful information and present the information to the end user.

63. OBD-II Scanner

Project Advisor	Mahmood Siddique
Status	Complete

A runtime monitoring system for different zone of vehicle to get the information from OBD - II connector via bluetooth or wifi. It is proposed to design a real time monitoring system, which is capable of diagnosing problematic PID's in vehicles. It will be easy to diagnose the real cause of the problem by looking into the history of the vehicle maintained by this application. This application will also be useful for remote repairing advice by the experts. The automobile companies can improve their vehicles according to area wise while focus on the problems customer having on that area. As for the customer they can enhance their vehicles life through monitoring the runtime data of their vehicles.

Hardwares:

- OBD-II Bluetooth Scanner or WIFI
- Android Device
- Supporting car

64. Microcontroller based data logging handheld

Project Advisor	Fahad Islam Cheema
Status	Complete

Microcontroller based data logging handheld carries features like GPS, Gsm to keep the track and send the message after the product is delivered.

Features:

GPS will keep the track from where the vehicle is going to the retail shop, if there is some problem occurred with the vehicle it will immediately respond.

GSM facility will respond as soon as the product is delivered to retail's shop. At the meantime slip will be generated to retail: receipt of good's deliverance and message will be sent to server.

Tools;

- Arduino development kit
- Arduino Gsm Sheild
- GPS receiver, 12 pin Keypad
- Monochrome graphic
- Small printer
- Ms visual studio or netbeans

65. Speak and Learn

Project Advisor	Armghan Shahid
Status	Complete

Application for children that helps them in their initial learning as it carries a feature of speech recognition, helps the children to learn English alphabets, numbers, , color names and short stories.

Tools:

Xcode
Matlab
Eclipse.

66. Hurdle and Person Detection System

Project Advisor	Adnan Ghafoor
Status	Complete

To develop a system for blind persons, that is capable of recognizing the hurdles in their pathway, family members, colleagues and friends and anonymous opersons'.

Tools:

- PC
- Camera
- IR Sensors
- Raspberry Pi/FXI Cotton Candy

67. Vehicle Security and Automation System

Project Advisor	Adnan Ghafoor
Status	Complete

A cost effective and user friendly system to secure the vehicle from smart phone application with a purpose to enhance security of the vehicles, to make tracking effective and to take advantage of android phone by facilitating the user.

Objectives:

- Password encrypted locking and unlocking only from the cell phone (via Bluetooth). If car door is opened by any other means it will trigger the alarm
 - Ignition On/Off will also be secured and controlled by the phone. It will be ensured that it is not easily bypassed (this work for both i.e. EFI and Carburetor Engines)
 - Car snatching situations will be prevented by ensuring automatic ignition off after some distance
 - Making all the working of electronic switches intelligent
 - Develop an android application
- Once the project is completed we will check its working and improvement will be done if required.

TOOLS:

- Arduino microcontroller with Bluetooth Kit

68. Content Wise Data Management System

Project Advisor	Saeed Iqbal Khattak
Status	Complete

It is a research base project and different parameters will be used to find and move the desired document to user specified path. This software works on different levels of search. Firstly, search the document by name such as a document named as “C++” then it will check for all “C++” documents by using data mining techniques and save them all in a user defined path. In case, file name is not relevant with the desired document title then

software will be unable to categorize the document. Second step is to check the document content by checking the document title at first place and then by searching for prefaces and finally indexes by using different data mining algorithms, if the software finds the relevant material then it will save the document to the user specified path. . Software is interactive and user friendly and easy to adopt at the same time.

1. Coding language (java, JNI , c , c++)
2. Operating software (linux)

69. Mutation Testing through Automation of Test-Case Generation

Project Advisor	Azeem Ahmad
Status	Complete

A system in which mutation testing will be used to create mutants in a given program, the tool first generate the test cases and then run those test cases on mutant till the best test suit is created.

Tools:

Eclipse and netbeans.

70. Live Treasure Hunt

Project Advisor	Haroon Abdul Waheed
Status	Complete

A real time scenario android game. The objective of this game is unlike any other game , it's not like that player just download it from the store and start playing it at once lying on the couch, in order to play this game player is required to move physically. Not only the mind but also the physical movements are made necessary to play this game. This will help to minimize the laziness among people, especially those who are so games addicted.

Tools

- Game engine

71. Aerocopper

Project Advisor	Liaquat Majeed Shiekh
Status	Complete

An automated helicopter that travels through source to destination over given commands and will be controlled via GSM module that enables the gadget to move to destination automatically. Following actions of the device will be entertained in our project

- Take off
- Landing
- Forward Move

All these movements will be controlled by an intelligent micro controller. The user will only have to give the destination location to the helicopter using GSM communication. The operations of the helicopter will be possible through mobile and web application over the internet. The location of the device could be viewed at the web and mobile application. Helicopter will follow an obstacle free path between source and destination on maps.

Tools:

- Proteus,
- Keil

- C
- JAVA

72. Cricket Match Highlights Generator

Project Advisor	Dr. Muhammad Amjad Iqbal
Status	Complete

The project is continuation of '**Highlight generation of cricket match video**', which detects the fall of wicket only. This project will generate highlights of main events of match like

1. Try to optimize detection of bowling frames.
2. Try to detect scoring window on the screen.
3. Try to optimize the detection of wicket loss frames.
4. Detection of sixes frames.
5. Detection of fours frames.
6. Generating a video comprising the whole detected events.

73. Property 4 U

Project Advisor	Muhammad Akif Bilal
Status	Complete

Property 4 U enables its user to sell or rent its property using I phone . Its user can also upload the relevant pictures of property. The user is able to

- Search property for rent/sale
- Bid
- Upload relevant pictures of property
- Communicate the agent for advice seeking
- Generates push notification as per user requirement

74. Smart Eye

Project Advisor	Saeed Iqbal Khattak
Status	Complete

An application that will be able to scan a document converting, into e-document , finding specific words, meaning , synonyms, basic English grammar, document spell check. **Tools:** Eclipse, java 1.7, 1.8

75. Mountain Glider

Project Advisor	Saeed Iqbal Khattak
Status	Complete

An ios game in which a player jumps from a certain height with a glider and starts flying. This glider on its way gets a chance to collect different point objects and has to face many obstacles till it's safely lands.

Tools:

- Unity 3d,

- kry,
- Udk,
- Xcode,
- 3d max

76. Resource Scheduling In Volunteer Computing

Project Advisor	Dr. Malik Shahzad Awan
Status	Complete

The study proposes an approach to solve the resource scheduling problem. It includes design and implementation of algorithms for resource selection in volunteer computing, mathematical model, comparison of existing algorithms and a desktop application for analysis of experiments.

Tools:

JAVA and SPSS

77. Cost Optimization In Weighted Graphs

Project Advisor	Dr. Malik Shahzad Awan
Status	Complete

An application with improved algorithms for handheld devices by modifying existing algorithms according to required scenario in which different parameters changes the weight according to environment.

Weighted graph having weight at edges and vertices and this weight changes continuously according to continuous change in environment, to find optimal path in this condition is a difficult problem. By modifying the existing graph in such a way that it resolves this problem in an optimal way. It gives the path that has minimum traffic load and other road hurdles and have minimum distance from our current location to our destination resulting in optimality in time.

Implementation of the above algorithm results in an application that gives the best suggested path avoiding traffic jams and hurdles before departing and at any point of journey. It also reduce the effort to call others to know where they are, you can just know their location on map and their estimated time to reach destination. It may also advise and remind you when to leave, to reach your destination in time.

Tools: JAVA. SPSS.

78. Gesture Recognizing Planner

Project Advisor	Muhammad Mustafa Hassan
Status	Complete

A desktop based planning application with gesture recognizing feature. Enables the user with features like

- Big screen/ full Screen View
- Day/month View
- Gesture recognizing features by using hand gloves and camera

The application will be developed by modifying existing heuristics

79. Prototyper

Project Advisor	Usman Sharif
Status	Complete

An intelligent wire framing application that supports functionality of sketching to provide ease to meet user's requirements.

The application helps in

- Making instant frames as per client's requirements
- Beneficial for both professional and Academic purposes.

Tools:

- Android SDK
- Photoshop
- NDK

80. Learning Group Theory Visually

Project Advisor	Khawaja Muhammad Fahad
Status	Complete

The project helps in teaching and learning fundamental concepts of group theory. Being useful for both teachers and students it provides visual representation of graphs and help in understanding important topics.

The projects focuses on:

- Closure property
- Identity
- Inverse
- Associativity
- Groups
- Sub-Group
- Cyclic group
- Generators
- Generating set
- Normal subgroup
- Group partitioning
- Co-sets
- Group homomorphism
- Quotient group

Tools: Eclipse/netbeans, Adt

81. Scan and Listen

Project Advisor	Azeem Ahmad
Status	Complete

The application is capable of taking snapshots of document provided, converts into text and then allows reader to listen but with a significant constraint as it is only able to detect clear hand writings.

Tools:

JDK 1.7 Eclipse

82. Customized ERP Solutions For Dairy Industries

Project Advisor	Kamran Shabbir
Status	Complete

Customized ERP solutions for Dairy industries is an ERP which efficiently manages to

- Collect
- Process
- Distribute

Dairy products by automating each phase in an efficient manner by providing number of facilities to the employees and business manager.

Tools:

- Adempiere (version 3.6.0 LTS).
- Ireports(version 5.5).
- JBoss (Application Server).
- Oracle xe 10 g(Database).

83. C2JS- AC Compiler

Project Advisor	Bilal Ghaffar
Status	Complete

A 'C to JavaScript complier', that efficiently translates a 'standard c' source program to equivalent Java scripts and thus can be executed in a web browser or an equivalent emulator.

Tools:

Visual Studio2012,
Google chrome,
Linux VM

84. Controlling An Android Device

Project Advisor	Saeed Iqbal Khattak
Status	Complete

The project will let to conduct the research on how android devices can perform in a better way. The device will be connected to desktop application and carries two different interfaces; developer and user. Developer can help the user to solve the problem he faces on his mobile device. E.g. running/installing an application. The developers can detect the error and resolve it using the desktop application.

Tools:

Eclipse, Jdk1.7

85. Pacisi 3d Mobile Game

Project Advisor	Haroon Abdul Waheed
Status	Complete

An android multiplayer, dice based game (Ludo)

Tools: Unity 3d , eclipse.

86. Senior's Care

Project Advisor	Haroon Abdul Waheed
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Status	Complete
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Objective is to develop the interest of old people in our application, by creating such environment where user uses different modules in the application. The focus is laid more upon to cater different age groups and various interest domains.

Main Features of this android app are listed below:

Share media and content.

Customized newsfeed.

Medical advice

Text to speech.

Show tailored content based on interest and suggestion by peers.

This App combines a magnifying glass, flashlight, and large-print notebook in one simple interface

Enlarged icons

Large buttons

Simple layout

Straightforward navigation

Alerts and reminders

Emergency assistance

Tools:

Eclipse,

Adobe Photoshop

Dreamwork.

87. A tool for data retrieval and manipulation by converting relational algebra into SQL.

Project Advisor	Azeem Ahmad
Status	Complete

A tool which helps the novice students to implement the relation algebra using RA operators and views the result of relation algebra queries . The tool also provides translation of relation algebra to SQL

Tools:

- RDBMS softwares
- Eclipse,
- Netbeans

88. Plagiarism Detector

Project Advisor	Saeed Iqbal
Status	Complete

Thes software is able to find out the theoretically plagiarism and plagiarized diagram through new algorithm. After completion of this project it will help out the teachers/instructors to catch the cheater and mark the assignments easily.

1. The core objective of this research project is to propose a new searching algorithm of plagiarism.
2. Software for the instructor in grading assignments.
3. Detect the copy paste assignments.
4. Image plagiarism check.

5. Store the whole data on NOSQL which store large data. There is no limit to store data. It is cheap because it not only supports expensive servers but also to support cheap servers. Solve the plagiarisms issues through web crawler.

Tools:

1. JDK for java
2. NOSQL Database Software
3. Apache
4. Xampp

89. Programming Tutor

Project Advisor	Mehmood Siddique
Status	Complete

A pedagogical tool that help students to learn programming. It carries features like

- flowchart to code conversion,
- code to flowchart conversion
- template based code writing
- visual representation of code.

Tools:

- Microsoft visual studio
- C#
- Photoshop.

90. Latent Finger Print Matching

Project Advisor	Dr. Abdul Aziz
Status	Complete

The purposed project is to do latent finger print matching. Finger print matching itself is time consuming and tedious task, therefore in Latent finger print matching, where complete information is not available it poses extra challenges. The scope of project is limited to finger prints taken on paper.

- Getting the best match of the latent finger prints taken from paper in minimum time.
- We will achieve minimum time by employing hardware and software efficiency technique.
- In hardware we will utilize hardware acceleration e.g. GPU or Xeon, and in software we will use memory efficient technique e.g. multithreading.
- Efficient storage and retrieval of images from database.

91. Towards Efficient Regular Expression and String Matching

Project Advisor	Dr. Abdul Aziz
Status	Complete

Regular expression and string matching is popular in network devices now a days for deep packet inspection, but due to lack of algorithmic scalability, it is still the performance barrier in practical network processing. We seek to implement an algorithm which makes regular expression and string matching faster and more memory efficient.

- To implement fast packet processing.

- To implement fast regular expression and string matching.
- To make regular expression and string matching more efficient both in terms of memory and processing time.
- To make network communication more secure.
- Employee parallel processing technique to make packet processing fast.
- To make hardware and software efficient.
- To combine string matching algorithm with efficient pattern matching.
- To perform fast packet inspection.
- To utilize
 - Software construct such as threading
 - Hardware acceleration such as GPU for efficient processing

92. Software Based Distributed Visualization System for Video-wall

Project Advisor	Adnan Ghafoor
Status	Complete

Video-walls offer a distinguished way to communicate important information to customers, employees or guests. Traditionally Video-walls have been hardware based, like hardwired and video-processors based. Which is costly and offers limited scalability with restricted distance. So we propose a software based solution to this problem, which uses the current infrastructure available in an organization, like PCs, LAN and display units. This will enable us to achieve much better scalability, flexibility and affordability.

Software-centric video-wall solution that uses ordinary

- PCs
- Display units
- Networking equipment

To achieve a distributed visualization system. It will deliver

- High Definition video
- Digital Images
- Real time replicas of screen display

93. HTML5 Custom Animation

Project Advisor	Samia Asloob Qureshi
Status	Complete

The idea is to provide user friendly interface with the help of which user can easily start their work by just choosing the required options from lists. The project generates the code for the actions performed by the user to build their custom animation. It reduces the risk of syntax errors faced by the user at the time of development and save time. The aim of the project is to help the persons who feels difficulty in writing HTML5 code. Especially in building custom sliders. It will generate the code at the end. Also save the time for programmers who does not wants to write the code.

94. Bike Battles

Project Advisor	Muhammad Umer
Status	Complete

Bike Battles stunt is a game that will be developed for Android Phones. The concept of this game is to develop an addictive, eye appealing and more catching. This game uses android accelerometer capabilities for users to control the game. With 4 different types of maps and 4 types of bikes initially user can play the game. Before the game play user chooses its type of bike. The game is played in progression mode; in which new upgrades are unlocked as the game progresses.

- Realistic Physics will be implemented using the algorithms that are provided in “Unity 3D”.
- User Interface will be Touch Based.
- During Game, User will control the bikes by using accelerometer capability.
- Back ground music will be played for different maps and riders. Might be able to introduce the user music in the game

95. Battle With Zombies

Project Advisor	Muhammad Umer
Status	Complete

One-on-one fighting game: Where “player” fights with “Com”

Battle with zombies is about fighting and defeating the with different types of enemies as to clear the stage. This game has multiple stages/levels.

- Each player is required to defeat its opponents within allotted time for each level (**Time 30 Seconds fight consists of three rounds**). Player’s face-off against each other with a variety of combos to combat and obstacles to overcome in order to win a match.
- Each player has to defeat its opponent with no time limit (**Infinite time fight**).

The game theme is based on Different environments where player goes against each other with different combo giving it a powerful touch. Each Character has unique punch skills with special attacks and combos having varying in speed and strength.

And there would be a **survival mode** as well in which player will unlock more combos, armor and more characters. When a player completes its level, difficulty level gradually increases to pose more challenge to the player. Similarly as the player advances further each level more fun additions will be added to compliment the game-play.

96. Eye-based Computer Controller

Project Advisor	Syed Kashif Iqbal
Status	Complete

This project is about controlling computer system through our eyes. This project will be of much use for disabled and paralyzed people. We will use the installed computer camera (internal or external) which detects the position of the retina and with the help of it, enables the person to move the cursor on computer screen. We use camera for this purpose, which finds out the accurate position of the person’s eye. The working of our software is same as that of a mouse except that it takes its input through the camera. On the starting of the computer first it recognizes the position of the user’s eye and synchronizes. We check out the blinking of the eyes in order to control the clicks. Our software discards the random blinks of persons eyes and for the right click user must blink their eyes twice and for the single click they only have

to focus for some specific time(sec).The potential limitation of the system is that it works only for the frontal face position, not for the side pose or tilted face.

97. Virtual Musical Instruments by Kinect

Project Advisor	Syed Kashif Iqbal
Status	Complete

A Kinect application which allows user to learn and play piano by using his/her hand gestures.

A piano costs around \$800 or more, our application will give an edge to its users who cannot afford a piano and will let them learn and play on the virtual piano to give them real experience.

The methodologies which are going to be used in the Kinect application are as follow:

- Kinect sensors
- Image Processing
- Open Computer Vision

98. Xbox 360 Kinect Game

Project Advisor	Zaid Munir
Status	Complete

The game developed in past were played by remote controls now we want to introduce motion playing games i.e. (games will require physical attraction with game to play it) . Our project is to detect and apply that motion to our game and our game play is fighting or action game. This involves physical movements to play our game. Xbox 360 Kinect will be required to identify motion.

99. Targeted Television Advertisement

Project Advisor	Imran Arshad Choudhry
Status	Complete

Most of the time while watching TV some particular advertisement attract us to buy that product, but with the passing time we forgot about that product and advertiser didn't get maximum benefit.

We want to give advertiser a new way to maximize his/her revenue by selling his/her product directly to the interested customer of the product and also for the customer to buy new, and amazing products which he/she watching an advertisement on smart TV.

We are developing generic application, which will focus on targeted television ads and provide an end-to-end solution to advertisers. We will target the audience watching particular ad or show on their smart TV.

The project involves smart TV and smart phone of user.

1. It is recommended based systems which will categories users according to their interest and also the user response towards the product and the similarity between products and user's recommendation will also be involve.
2. Watching a smart TV channel, when the ads of particular product shown, user will get the pop up on our application.
3. Only the user interested products messages will be send

- With this we can allow user to buy the particular product through our application

100. Countries at WAR

Project Advisor	Imran Arshad Choudhry
Status	Complete

It is a 3D based multiple stage First Person Shooter (FPS) Personal Computer (PC) game developed by using unity 3D game engine. In this game our main character is Adeel Ahmed and user has to complete given objectives to reach next level. It is a strategy based game in which user will have to take decisions while playing and enemies will react accordingly.

101. EMS (Educational organization Management System)

Project Advisor	Zeeshan Ali Rana
Status	Complete

A school management systems are working already but we are providing a solution to an organizational type structure in which that educational organization can manage its sub branches and also expand its structure on the basis of analysis provided by our system.

Parent-teacher interaction plays a vital role in a student's educational career so we are providing an interface to parents and teacher to interact with each other and discuss student's performance. Our system will also provide suggestions regarding their child's future career on the system based analysis of that student's performance.

Student-teacher interaction is also important as our young generation is gadget addict so we are providing an interface to students where they will be notified regarding activities of their courses in which they are enrolled. A student can also prioritize his educational activities, and on the basis of these priorities our system will send reminders.

102. Scene Generator: An NLP Based Approach

Project Advisor	Zeeshan Ali Rana
Status	Complete

We present a text to 3-D Game Scene Generation system that interprets the requirements specification in a controlled natural language to a game scene. A user provides a controlled natural language text from which the system will identify objects and extract explicit constraints on the objects. Furthermore, system will then use database of object models to infer the most likely layout of objects in the scene and their relative positions. Our system scope is genre-specific to Arcade/Fighting games where multiple characters face each other in a fight (i.e. Street Fighter, Tekken etc.). Through user feedback, system will learn and improve its' scene generation. We envisage that our system will speed up the game development process by pre-visualizing the scene.

We have confined ourselves in the domain of game development so the problem we are trying to solve is how to create a game environment (i.e. How to create a 3-D scene of a particular instance of a game from a language that is closer to Natural Language). Now this activity of 3-D scene generation involves the following sub-tasks:

1. Constraints Parsing
2. Identification of Objects in the given text
3. Objects and Actions and their relations
4. Placement of objects in a scene

103. Learning on the go

Project Advisor	Muhammad Mustafa Hassan
Status	Complete

Basic programming learning is complex for many novice students. Learners always face difficulty in creating mental model. There are many software visualization desktop tools like Jeliot, Eliot, BlueJ and Jeco which help learners to learn how to understand programming. However, all these tools run on desktops providing learning in a particular context.

Since modern generation has shifted from desktops to mobile devices, a possibility of creating context-free learning tools has emerged. However, no such tools are available. Thus, there is dire need of a software visualization mobile application that provides learning on the go facility.

104. Lost In The Woods

Project Advisor	Fawad Nasim
Status	Complete

This is a single player side-scrolling puzzle game with the grayscale GUI. The user will face different scenarios and traps which requires good intellect in order to pass through different situations.

In this game a user have to pass through a challenging environment. The world contains scenarios like where it seems that there is no way you can pass through but using different objects and using the environment smartly can make the user successfully proceeding to the next state of the game.

Generating the puzzles in the game is a real challenge as we want to make the user fail before he finds the correct solution for this purpose we have to understand the user's way of thinking and breaching his/her limit of intellect.

As the game is developed by the Microsoft studios consisting of a large team, we are trying to make that game on the Android device which itself is a tough challenge.

105. Endurance Run

Project Advisor	Fawad Nasim
Status	Complete

A 3D Android game in which a character will be running while facing hurdles. Some hurdles will be instant moving and some will remain still, character has the ability to run faster to cross some hurdles. A moving object will be chasing from the back of character and our game will display the front of running character towards the user and they have very less time to cross the obstacles. In some scenario our character will give tough time to user by blindness effect. After collecting some coins user will be rewarded some powers and user can use the powers according to his need. In our game we will make different levels and the

benefit of that is user will not get bored as when most of the endless game starts it start from the beginning.

106. Multiplayer Poker

Project Advisor	Sheraz Ahmed
Status	Complete

Multiplayer poker is social mobile game. It will be developed using COCOS-2DX engine, App Engine, Compute Engine and Node.Js(Server side). We are targeting Android platform. In this game User is real time user who choose the table and will play poker according to poker rules with other real time players who are sitting on that table. The User will earn or lose chips if player win or lose the hand respectively. The main purpose of the user is to earn chips by winning hand.

107. Unmanned Ground Vehicle (UGV) with Mine Detector

Project Advisor	Liaquat Majeed Shiekh
Status	Complete

A small-unmanned ground vehicle, which is used for mine detection purpose. It will provide information of the place with mines. It finds its destination by avoiding any obstacles in its path by using sensors. It will acquire destination coordinates given by an android application, building a dynamic map and updating its path accordingly.

It becomes difficult to track mines in places where it is difficult for humans to reach. Similarly, for security purposes, checking the place for mines and metals before any VIP events like political rallies. This UGV provides a platform for detecting mines and informing the concerned authorities. On a successful completion of this project, we can propose this system on larger scale by providing inter process communication between vehicles

108. PicSpeak

Project Advisor	Syed Kashif Iqbal
Status	Complete

This android based application is capable of extracting English text by capturing image in real time using a mobile camera and translating the interpreted text to Urdu Language. This application is also capable of converting the extracted text into English audio format. The users will be able to save the extracted text into text file format for future use.

This will significantly help the users who find English difficult to understand.

This application will be developed using different methodologies, including Artificial Intelligence, image Processing, Computer Vision and Mobile Application Development.

109. Real-time Event Alert System

Project Advisor	Usman Afzal
Status	Complete

Our idea is to create a mobile based application which give alerts of unwanted events through push messages. Our application allows user to mark area using geographical information system and user get the alerts of any unwanted events like bomb blasts, crossfire and protest rallies. Application gives alert to the people not to go in affected areas. If a person is present in a place where any unwanted event occurred then our application suggests the user to leave the place as soon as possible. If an affected area comes in the destination of our user then application suggests an alternative path. Our application get the information from RSS feeds and event crawler. RSS feeds come from multiple channels and event crawler fetches data from where RSS feeds are not available, we filter the news and make it one alert. User can also post news on server using tags and our application also maintain live discussion forum where people discuss on current event.

110. Pre-Compiler for Good Programming Habit

Project Advisor	Usman Afzal
Status	Complete

The major difficulties in understanding, maintaining and extending software code are due to bad programming practices and inappropriate code structure. These issues result in increased cost of refactoring^[8] and restructuring^[8]. In this project we shall develop an application to solve these issues. This application takes C++ code as input and checks the code against set rules. The set rules are based on good and bad programming practices (also called code smells) reported in literature. If the input code has been written according to the set rules, the application allows the code to be compiled by the C++ compiler. Otherwise the application indicates bad programming error and asks the coder/user to correct the error before compiling the code.

111. WeGamble

Project Advisor	Zeeshan Ali Rana
Status	Complete

Players interested in playing casino or gambling games do not find multiple games in a single application with also being able to play with other users. We are developing an android-based application through which the player can play multiple casino or gambling games in a virtual casino environment. Moreover, our application is a multiplayer game where the users can play with other app users as well as a bot. The users can roam around in a free-roaming environment. Casino or gambling games require handling of random events. Based on these random events, our game/application will be responsible for the transfer of coins (or chips) among different players. Using our application, users can share their coins with other users. Furthermore, our application allows its users to post their stats on social websites like Facebook or Twitter.

112. WIFI ANALYZING AND SURVEYING SYSTEM (WASS)

Project Advisor	Waleed Akram Baig
Status	Complete

This project is designed to reduce the interfering sources by running simulations. Interference is one of the primary factors to reduce Wi-Fi performance, causing flaky connections. The problem is we don't know that the access points will be able to provide coverage on the complete site due to these interfering sources. We will do active and passive, simulation and runtime survey to check and reduce interfering sources by placing access points at different

locations on the site. At the end our project will be able to examine these interfering sources and will map the Wi-Fi signal strengths on the site and finalize the blue prints accordingly. The project will examine the Wi-Fi interfering sources and will report where to place the access points to get least interference and maximum coverage.

113. Plagiarism Detection in Programming Assignments

Project Advisor	Dr. Muhammad Humayoun
Status	Complete

Now-a-days the enrollment of students to university level is increasing day by day, among them a large group belongs to computer sciences. So, it becomes very difficult for an instructor teaching programming courses to check a large pile of assignments.

In case of distance learning like in Virtual University of Pakistan, they need to hire large number of teaching assistants to manage the large number of students and it becomes much difficult for the instructor to evaluate the assignments as well as cost a lot.

We are going to develop a tool, such tool that can play an important part in the field of an assessment and E-learning based system which will facilitate the instructor in large number of ways like:

- Detecting the plagiarism against each assignment of enrolled students in a particular course.
- It will alerts the instructor to confirm those students' assignments carefully whose plagiarism threshold level will be greater than the given threshold level.
- It saves enough time of an instructor for verifying the assignments plagiarism of an individual student with the rest of the students in the class.

114. 3D Dynamic Drive

Project Advisor	Farah Naaz Raza
Status	Complete

The motive of this app is to dynamically generating environment according to the user surroundings up to some range, allowing user to drive anywhere in this environment up to specified range, assigning tasks to user to complete in given time frame and making the app interesting by following the app rules.

115. Review Analyzer

Project Advisor	Imran Arshad Choudhry
Status	Complete

Review Analyzer is online rating app where people can find rating of mobile phones on the basis of reviews on it. This application will be web based along with an android application. This application will provide user a generic review of the product. Instead of reading every single comment one can simply look at the rating and decide is it a good product or not?

User enters the query in the application and based on the query it will scan the websites (mentioned below) and give a result to requested query

- www.phonearena.com
- www.mobilettechreview.comd
- www.gsmarena.com

Our system will scan different reviews from websites and then translate them into rating and answer the required query accordingly.

116. DBMS For Android

Project Advisor	Azeem Ahmad
Status	Complete

Currently ANDROID developer are using SQLite to design Database in ANDROID application, and they do it by writing a huge piece of code in development tools which is time consuming for them. Our main idea is to design database management system for android developers in which they can easily manipulate the database tables and relations between them through a very friendly user interface. DBA (Database Administrator) will be able to set permissions, trigger, and views on specific tables. Through this we will save the time for developers and it is also easy to learn.

117. Partner`s Fight

Project Advisor	Samia Asloob Qureshi
Status	Complete

Our game is based on relatively new concept about moving objects. We are focusing on 3D and dynamic (moving) objects by using AI concepts like model based agent and learning based agent. We will follow the Incremental project life cycle to ensure the running application after each phase.

This project is android based mobile game named partner's fight (3D). It will be a fight between two partners only. There will be two modes

- Single mode
- multi-mode game(via Bluetooth and Wi-Fi)

Each Mode will be divided into easy, normal and hard complexity. Each complexity modes further divided into home, office and café. Each complexity mode will contain 10 levels.

Game will maintain the user life power and point. Database will be maintained for life power, levels, gold, points and rewards.

User will be provided by shield (booster) for safety and can pass comments in form of voice, facial expressions and by typing comments from phone.

118. Act of valor

Project Advisor	Muhammad Bilal Arshad
Status	Complete

The project is a 3d action-adventure and strategy game for the Windows platform. The game will be comprised of four levels. The game revolves around a prisoner of war. The user will use different skills in order to breakout of the prison, gather his men and stop an

attack on his country. The player will have to use a different skill at each level. Level 1 will require stealth, Level 2 will require sharp shooting, and Level 3/Level 4 will require combat and driving skills.

119. 3-D Virtual Dressing using Microsoft Kinect

Project Advisor	Muhammad Bilal Arshad
Status	Complete

3D Virtual Dressing is an application of Augmented Reality. The purpose of project is to facilitate the people to do shopping in a smarter way. The problem is to develop a system which enables customers to try on dresses virtually by just standing in front of a screen and to check which size, color, fit and style fulfills their requirement, rather than physically wearing the dresses one by one.

A software will be developed for Windows Presentation Foundation (WPF) which will make a 3-Dimensional Model of the dress and the person. Finally it will fit the dress on the person to show them how they look like in the dress. The person can try any of the available dresses and select its variety and colors using hand gestures and voice commands and can enjoy the shopping at ease.

120. Kabaddi

Project Advisor	Imran Arshad Choudhry
Status	Complete

We are developing a game that uses a motion capturing device called Kinect, provided by Microsoft, which will convert the whole motion of the body into a typical kabaddi player. This device will by design, measures the human stances as joint positions in three dimensions.

The game will use the cameras, sensors and motion detection software of the Kinect to sense the depth, shape movement and position of human body.

In this game defining movement is very important including hands and feet. It is also important to distinguish between the movements like moving left or right, up or down, sit, grabbing the opponent. After the detection of movements from the user we have to control the character of the game to move left or right, sit, grab the opponent, and jump.

This game is an arcade type game and could be played over the network. The player can select a character of his own choice and also can customize a character according to his/her demand. The background location/venue can also be selected as well as customized by the player. To make the game look like real environment an option of audio message will also be given in the game in order to challenge the other opponent over the network.

The player can also play a tournament in which different players over the network would be able to participate but at one instance only two players will play a kabaddi match. The history of tournament, records and positions according to the points will also be maintained.

121. Can You Dispose The Bomb

Project Advisor	Fawad Nasim
Status	Complete

Can You Dispose the Bomb is 3D story based game where your character will be bomb disposal officer. Character will find bomb going through the rooms of building combing

clues and hints to find the bomb in time. After finding the bomb he has to dispose the bomb by solving a puzzle. If he fails to solve the problem, bomb explodes. This game will have different levels and every level will be difficult than the previous level. This will produce curiosity for user so that user will want play game again and will not get bored.

122. Text To Speech in Urdu (TTSU)

Project Advisor	Usman Afzal
Status	Complete

Our problem is that a wide population in Pakistan is unable to read out the Urdu. Even some of the very literate people are unable to read Urdu because of the modernity in the Global World now a days. Providing them such an API that can read out the text written in Urdu, in Urdu can help make life, work and things easier. Even if someone knows how to write Urdu, he/she can write the text in Urdu and can be TTSU at the same time. The API would not be able to cover the whole Urdu language. Instead we will be covering voices of all numeric values

Such as

ایک دو تین چار
سو ہزار لاکھ

123. Efficient Hybrid Security System

Project Advisor	Muhammad Nazir
Status	Complete

The main purpose of this application is to reduce the chances of security breach at the restricted areas. Our Efficient Hybrid security system will be helping out the Security departments of the different Organization's such as GHQ (general Headquarters) and Manawa police Academy.

The main objectives of our Application is to

1. Recognize the face of a person while entering in the restricted area through face recognition algorithm, so that we can track that person.
2. Dual authentication will be done i.e. from face and from card.
3. Incoming records will be saved when the person will Swipe the card and enters in that area.
4. Our Hybrid Security System will also do the video surveillance.
5. System will allocate the face an ID

124. Prayer gestures & Postures Recognition trainer

Project Advisor	Farah Naaz Raza
Status	Complete

As we already known Muslims offer prayer five times a days. There are no ways to recognize the postures of individual during prayer in an enclosed environment. So there is need to identify the correct actions. We are going to develop a learning base desktop application that's acts like a virtual trainer. So in this way one can correct him by seeing the right ones. With the help of Microsoft motion sensing Kinect device which observe the actions of

individual and determines the mistakes occurred by individual. Our work includes two major contributions

- 1) Dataset recorded using Microsoft Kinect
- 2) Development of Recognition System.

125. Roman Urdu to Standard Urdu Transliteration

Project Advisor	Dr. Muhammad Humayoun
Status	Complete

The basic reason behind this project is to convert Roman Urdu into Standard Urdu. As the Standard Urdu is easy to read but hard to write in mobile phones so users that are not good in reading roman Urdu they will convert it into Standard Urdu. . In this project we will gather a list based data that have transliteration of Roman Urdu letters having same sound in Standard Urdu but its written style is different. Application will be developed for

- Desktop
- Web-based
- Android
- iPhone (if time permits)

126. Complex Maze Solver Autonomous Robot

Project Advisor	Sajid Hussain
Status	Complete

The aim is to design Wi-Fi autonomous robot that solves a maze. Robot will start moving from flexible start point and reach its specified destination by following various paths. The right path will lead it to reach its destination. The robot will be capable of detecting loops and avoiding hurdles in the path dynamically. Once the destination is reached, the robot will be able to reach its source back by following the right path. Although the robot is autonomous however, it will receive modes of operation from its operator through android application via Wi-Fi. The android app will also be used to receive data (shortest paths) from robot. The robot can be configured in various modes of operations through android app.

127. Development of a Parser for Mathematical English

Project Advisor	Dr. Muhammad Humayoun
Status	Complete

The project idea is the first step towards making a mathematical parser for English language used for writing mathematical theorems and proof, and found in first two chapters of **Foundations of analysis** book by **Edmund Landau** [1].

Aim is to achieve, three concrete steps.

First, to develop a limited and precise grammar in a suitable framework. The developed language could be a ‘controlling language’ for Mathematician.

Secondly, to translate the “controlled language” into a system independent, formal description language. The final outcome is a math parser that generate first order logic of the given math text. It is a software package that is useful for mathematician and math students to automatically parse the math text instead of manually.

128. Urdu word segmentation

Project Advisor	Dr. Muhammad Humayoun
Status	Complete

Urdu is one of the languages that face word segmentation challenge, in which space does not always identify the word boundary. It has not only space omission errors but also has space insertion errors unlike other Asian languages. Other languages like English have spaces to represent its word boundaries, but Urdu does not follow this trend.

Objectives:

- Identify word boundaries from un-segmented Urdu text.
- Examine existing algorithms used for solving word segmentation in various languages such as English, Chinese, Japanese, Thai, etc.
- Focus on longest match, maximum match algorithms and maximum length descending frequency and entropy rate for Urdu word segmentation. However, if time permits we will explore more techniques discussed in Related Work section.
- Evaluate implemented algorithms on a test set that we will generate

129. Object detection for visually Impaired

Project Advisor	Mohsin Abbas
Status	Complete

The visually impaired people do not always have help. Therefore they need something portable that is always with them which can act as their eyes. Most application designed for visually impaired use GPS (Global Positioning System). Hence they are only as accurate as the GPS. GPS is not very useful indoors or areas with high buildings which results in inaccurate results. Countering the problem, the aim is to develop a gadget which provides accurate results indoors as well and does not rely on internet connection. Two cameras attached to the Raspberry Pi. Gadget will need two cameras to identify the depth of the obstacles. This task will be accomplished using stereo imaging. Different stereo imaging algorithms will be applied to identify which algorithm detects obstacles with the most efficiency.

130. Code Robot

Project Advisor	Mohsin Abbas
Status	Complete

Project provides a robot that helps to learn programming basics, by engaging a student's focus on a physical robot. This project is to make a Robot that gets the instructions and acts accordingly. This is a learning aide for programming.

Tools:

- Stepper motors / servo motors
- Motor controllers
- Rechargeable batteries
- Bluetooth module / RF Module
- Microcontroller Burner

131. Metrobot

Project Advisor	Dr. Mushraf Hanif
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Status	Complete
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The project assembles and configures a humanoid robot. Placing a camera on it to keep track what is in front of robot. By using some algorithms it recognizes objects and then it decide what to do, either change the way, stop or move in backward direction. This process is called obstacles avoidance. The project work on different things like assembling, configuring, and Image recognizing and mathematical calculation. Knowledge area of this project is Artificial Intelligence, Image Processing, Assembling and hardware configuration.

132. Automated Diagnosis System

Project Advisor	Farah Naaz Raza
Status	Complete

The projects develops an automated diagnosis prescription and user administrative system. The user would interact with the system tells the user about its physiological symptoms the system and inform the user to get his self-tested for the corresponding physiological symptoms. The system will then generate the prescription according to the physiological symptoms and tests reports (if applicable) from its knowledge base. In case the system senses the symptoms to be more complex than its knowledge base will refer the user to the nearest hospital.

The system will manage all the necessary communication with the patient administrating staff including its consultant and all other paramedic staff on the user's behalf. This would avoid the hustle of unnecessary paper work and wastage of time on the preliminary diagnosis of the user as we are also providing the consultant about the patient's history giving them clue to where to start.

The system will provide the co-ordinates enrooting the patient to the nearest hospital in the shortest possible path using Gps Google maps.

133. Be the gladiator

Project Advisor	Muhammad Bilal Arshad
Status	Complete

Be the gladiator is a game for Windows PC via the Microsoft Kinect sensor [1]. The game will be based on the Gladiator theme in which there is only one motto "Fight till Death". The players will have their actual 3-D model generated one time during the profile creation in order to achieve maximum realistic fun. Players will use different weapons and body gestures during the fight. The game accommodates single and online multi-player game modes. Additionally, to entertain a single player there will be an arcade mode, which runs on the basis of a storyline and in this mode the player will fight with the computer generated artificial intelligent characters which includes other fighters, a bull and a lion. The story have different levels in single player mode; easy, medium, hard and super intelligent. All levels have different stages and by completing each stage the difficulty will increase. At the last level the computer based opponent will learn to fight in a better way through previous attacks of the user.

134. Naughty Fire

Project Advisor	Zaid Munir
Status	Complete

It's a novel marketing solution harnessing the power of smart phones. This app would allow landmark owners to push notifications to users using this app; when they pass through the shop. The user can write the review and give the rating and avail any offers that might be available. User will also be able to read reviews, share check-in and upload pictures on the social networks. The owner will be able to give discount on the basis of the visit. User would have to unlock tokens by visiting the landmark to get the loyalty discount. User would have to identify their visit by scanning the unique QR code assigned to each landmark.

135. My Lahore 3d

Project Advisor	Fawad Nasim
Status	Complete

Game provides you the liberty to enjoy your imaginations which can't be fulfilled in real life by providing such environment in which user feels rejoiced, like Racing and in racing games buying the expensive cars and customizing them according to user's wills. There are some games of the same type developed by Zynga for Facebook in 2010 like Farm Ville, City Ville and Sims City. In these types of games the buildings are developed and maintained/updated by investing the earned money by performing certain tasks in game like a person builds his own house due to these reality factors users seem to be addicted to these games. There is a huge market of games on Play Store as it generates greater part of its revenue by selling games. This is a 3D terrain based android game. In which character is nazim of Lahore and his main goal (Mission) is to develop his Lahore and make the people happy.

136. Usecure

Project Advisor	Armghan Shahid
Status	Complete

The idea is to implement an android based client server unified communication system using asterisk which is used to communicate on network. It provides the features of encrypt the call by modify the RSA algorithm. It also providing other exciting features like conference call, transfer the call, video calling, text messaging, data sharing, maintaining the list of connected users, record audio and hold the call by using asterisk server. A separate server for data sharing and chatting between clients will also be developed.

The main objective of the project is to implement a client server base unified communication system.

Server software has following features:

- Establish the connection
- Block the user
- Generate report of user sessions
- Data sharing
- Chatting

Client software has following features:

- Encrypt the call
- Conference call
- Transfer call
- Video calling
- Chatting
- Data sharing
- Audio recording
- Call hold or mute
- Maintain connected user's list

137. Kinect Based Smart Game controller

Project Advisor	Farah Naaz Raza
Status	Complete

The aim is to develop middleware software for Cricket Games in which input is taken by user's body gestures through Kinect, which will be passed to the Game. This Game Controller will act as a communicating medium between the Kinect and the game. It will make it possible to take all of the original game inputs through Kinect. Inputs that are taken through the keyboard, joystick or mouse before, now will be taken by the body gestures of the user. Smart game controller does the following

- Allows users to play their favorite game without any hardware strokes. They can play their cricket games with gestures.
- Works as middleware software (a computer software that provides services to software applications and makes it easier for developers to perform communication and input/output— connecting any hardware with a software or two software together) between a Hardware (Kinect) and a Software (Cricket Game). It will take input through body gestures of the user and will respond accordingly the predefined responses of the original game.
- Ensures communication between user's body gestures and Games.
- Comprises of extra features of managing menus and settings with voice commands.
- Kinect uses inferring sequences of different body position in a two-stage process: first compute a depth map, then infer body position. Then Smart Game Controller will use these body positions to specify the user action and then it will create an input for the connected game according to the user's action.

138. Street Fighting In Modern Age

Project Advisor	Muhammad Bilal Arshad
Status	Complete

'Street Fighting in Modern Age' will be a Windows based game that will use gesture recognition using Kinect sensor for Windows. It will consist of three modes for multiplayers and an arcade mode for single player with easy, medium, hard, and smart AI based mode. Combined these will provide interesting features of the game to the player.

For single player gameplay, there will be an additional Arcade gaming mode in which user will have multiple options to fight such as easy, medium and hard mode. In addition to these modes, there will be a special mode as artificial intelligent (AI) mode in which computer controlled characters will learn from users action and perform smartly as game goes further in this mode. The game will consist of single and multi-player 3D fighting approaches with salient playing modes so that user can enjoy and entertain themselves at maximum level. Multi player gameplay is online and will consist of boxing, kickboxing and magical fighting in which the opponents will have some special moves to knock out each other.

Following are the objectives, which are required to develop Street Fighting in Modern Age using Kinect sensor for Windows:

- Providing touch less gameplay environment
- Mapping the real-time sequence of gestures to the 3D Model
- Providing three different online multiplayer gaming modes:
 - Boxing
 - Kick Boxing

- Street Fighting with special moves
- Offline Single player Arcade gameplay with following modes:
 - Easy
 - Medium
 - Hard
 - Special Mode (Based on AI)

139. Robot Surveillance

Project Advisor	Mohsin Abbas
Status	Complete

In disastrous situation e.g. when a building collapses people get stuck in the collapsed rooms sometimes it is difficult for a human to reach to them and save them. If we could make a robot that is cockroach like and can creep to those places and gather information through a camera.

Aim / Objective / Target

The aim behind this project is when a building collapses there are some places where humans cannot go and we want to know if there is someone still alive there. Also, if we want to survey a specific area our aim is to use this robot for that purpose.

To reach to those places and find if someone is stuck there

To gather visual information and going surveillance.

140. Document Management System

Project Advisor	Usman Afzal
Status	Complete

Document management system uses SharePoint to help in retrieval and storage of useful information within the organization according to their requirements. It will be fully customizable, organizations can assign rights according to their Policies. It can store documents according to their versions.

Document management focuses on the storage, retrieval, content sharing versioning, expiration of document within an organization. Ensure the consistency or workflow of document that how document is handled during his lifecycle. It can protect by unauthorized access by alert messages and creation of wall. Provide Security to stakeholders and Manage metadata (structural and descriptive) piece of information that created the unique to the organization.

141. Academic Recommendation System

Project Advisor	Dr. Abdul Aziz
Status	Complete

All students have different academic standing, efficiency/deficiency on particular area of subject. Study material available on World Wide Web has no classification in terms of student's academic standing. There is a need of a system which recommends study material based on the academic efficiency and deficiency of the student.

This system proposes study material to student which will be according to the student's academic standing. E.g. if a computer science student wants to study about basic programming techniques using C/C++ language, and his/her academic standing in this subject is very low, so the system proposes the user only the relative material categorized on

the basis of students academic. The work is not limited in providing the relevant material but it becomes more challenging as soon as the students starts to grasp the knowledge. The complexity level of given relevant material gradually increases and becomes more challenging depending upon the efficiency of students

Our system will provide academic recommendations based on the academic efficiency and deficiency of the student.

142. Duplicate Video Matching Tool

Project Advisor	Dr. Abdul Aziz
Status	Complete

The duplicate video matching tool determines the duplication of videos, irrespective of their resolution, format, encoding parameters, length, frame difference, augmented subtitles or photometric variations (color, noise, brightness etc.).

This tool provides a solution for the problems that arises due to the massive amount of online video collection and sharing such as: copyright protection and content filtration.

In our project we will first extract the features of the videos to be matched (e.g. frames and audio features). On the basis of the features extracted, unique signatures will be generated against each video using the pre-existing signature generation algorithms and then these signatures will be compared for duplicity detection.

The project covers the following knowledge areas: image processing, data storage and retrieval, parallel processing, and GPU programming.

143. Virtual Classroom

Project Advisor	Dr. Haroon Mehmood
Status	Complete

Every emerging institution or organization is converting their physical meeting into virtual meeting to save time and efforts in this busy world, same like that student who attends lectures physically in class room can get benefits from virtual class room which provides facility to register in courses which the university is offering. Whenever the course is scheduled the students who want to take that course will be given alerts in the form of SMS and email about their course timing and topic.

Students can get benefits from live video streaming of lectures in lecture time as well as recorded lectures which they can watch in free time. Students can also post question in a blog in live lecture as well as in recorded lectures. Teacher will be given alert of every question posted in the blog to answer.

Lectures are recorded using camera and camera will follow the teacher and detects the motion when teacher moves in the class room, furthermore it will also focus on white board when teacher will write something on board. Students can watch recorded or live video streaming of lectures on android application as well as on web portal.

144. Health Service Assistant

Project Advisor	Liaquat Majeed Sheikh
Status	Complete

Health Service Assistant (HSA) is a front end user app that will be used for a medical assistance, portable app that would help connect with doctor's details using the internet. It's free and user friendly to its core.

Its main objective is to provide a technical yet portable experience that would be a first step for Pakistan where people would be motivated to use apps that are for practical usage. Such as, people will use the app for free and get different information about the certain or specific doctors they want to. They can set appointment, send e-mails, even get directions for the shortest route possible on map, all on their smartphones.

A list categories of different doctors' like, Dentists, Cardiologists etc. If a user doesn't know what kind of problem does he has or which category of doctor to choose, Symptoms-Finder section of our app will provide assistance. Users can also rate the doctors according to their experience.

145. Automated Vehicle Driver Fatigue Detection

Project Advisor	Muhammad Nazir
Status	Complete

Fatigue detection is an important factor in a large number of accidents. It will be used for the safety of driver and all passengers and to protect them from accident. On detection of low vigilance and high fatigue level of driver, the driver will be alarmed to take rest. And in case of public transport higher authority/ control room will be notified about the driver's fatigue. Camera fitted in the vehicle will record a live video stream of driver which will be the input for our 'Fatigue Detection' software to detect fatigue level of driver by applying different algorithms.

The Basic work of 'Fatigue Detection' software is to automatically detect human face and then track his/her facial expressions, as soon as driver feels tired, the system is responsible to alarm him/her to take rest. We will develop robust routines for detecting and tracking of Human face. Then detected objects (on human face) will be classified into different categories such as eyes, mouth, pupils etc. These labels will be used to improve tracking analyses. Further classification of human activity, such as talking, yawning, eye blinking, drowsiness, laziness etc. will be also be done to detect low vigilance fatigue

146. Filo Filter

Project Advisor	Dr. Haroon Mehmood
Status	Complete

A desktop application which filters and categorizes the files based on keywords/objects present in that file. The application uses an efficient indexing mechanism to provide a proficient and easy way to search and display files containing user provided keywords or objects. The application will be able to save pictures, images, word and PDF documents by assigning them related keywords, for instance, if an image contained a tree and a house, the image will be assigned keywords of "tree" and "house" or if a document contained some particular, notable words time and again, these words will be assigned to the document as keywords. Application will automatically categorize the files by scanning the objects in it and then generating keywords according to them. Apart from that face recognition feature will also be added to the application to make it more versatile and beneficial.

Objectives are as follows:

- Easier to find files with keywords as compared to manual search
- Finding a specific image is easier with face recognition feature
- We will add other filters like date/time of creation, last modification etc.
- Data mining techniques will also be implemented on the top of this application to find specific pattern present in the files. For example to find which two persons are mostly together in pictures

147. Virtual Office Assistant

Project Advisor	Dr. Ahmed Shabbar Kazmi
Status	Complete

A virtual robot that will help a user to perform most of the daily (office and personal) tasks on the computer. This virtual robot is called a Virtual Assistant (VA). Meetings and reminders can be scheduled through VA, reading of unread e-mails can also be done by VA. The VA will keep track of all the meetings and reminders. VA can surf the web for some particular information and save it for future use. VA can read document and prepare summaries. VA can prepare documents like spreadsheets, presentations and letters etc. In a net shell VA can perform all the tasks of a human personal assistant. A user will assign tasks to the VA using a predefined form and natural language processing will not be tackled in the current scope of this project.

Objectives

- Search and read deadlines from the UCP portal and alert us via SMS
- Student just need to give a document, our system prepare a summarize document.
- Generate meeting reminders about meeting with friends or teachers and alerts about project or class assignments deadlines and important announcement.
- Read the specific topic and generate complete document, along with a summary, using desktop or internet material.
- Make presentations of given topic slides material provided.
- Make excel sheet data for the data provided.
- Extraction of deadlines will also be done by reading e-mails, create reminders for remembrance, user marked names for important e-mails
- This system will take notes from selective emails and alert the user of this system by sending text message to the provided contact number.

148. Lahore Travel Guide

Project Advisor	Maj. Faisal Masood Sheikh
Status	Complete

Our application is a cost effective solution to the strangers in an unknown city. In past they have to physically find the guide and then pay him to visit the popular places, historical places, best restaurants and other places. They don't even know where to go in a new city because they don't have any idea about directions. They came with a list to buy things from this city but could not find the best place to buy these things. In order to solve these problems we are making this application.

Objective(s) / Aim(s) / Target(s)

- To get rid a tension of a guide.
- Automatic push notification according to BUY LIST.
- Notify nearby places.
- Find famous and historical places.
- Scheduling plans to visit places.
- Sharing pictures and locations on social media.
- Search thing and find the places from category.

A Gps enabled Application, that helps a tourist to set a destination and get the shortest route. This application is unique as it provides its user with a feature of BUY List. (Buy list contains the name of item the user wanted to buy from the visited city). The list is built by the user himself with the desired items he wants to buy. A push notification is generated when user on visits a place where of any of the listed items is available.

149. Swipe and Share Android Application

Project Advisor	Sajid Hussain
Status	Complete

As we know nowadays smart phone usage is increasing day by day. By using smart phones, people want to watch or share contents (like Media file, games, document files) of smart phone with others on big screens (like TV, Projector, Monitor, LCD). There is no such type of feature included in many smart phones to display contents on big screen and those smart phone mobile which support such feature have limitation with hardware configuration. So, an Android Application will be introduced which will be programmed to interact wirelessly with our hardware device connected to other big screen to share smart phone contents by just swapping on the mobile screen. The end product will be a hardware device associated with an android application which will be used to stream the smart phone screen data to any bigger screen wirelessly with one swipe.

Objectives

:

- Play media files of smart phones on big screens with voice and picture.
- Display Documents (power point slides, word documents etc.) on Projector and Different Screens when not having slides or other data in computer.
- Games display and playing on big screens with graphics and voice by using mobile phone as a controller.

150. Voice controlled Home Appliances

Project Advisor	Mehran Rashid
Status	Complete

This project aims to develop a system that will operate home appliances with the help of Microcontroller using call/voice messages. Remote control technologies are widely used to control household electronic appliances without walking up to them. It is also possible to control house hold appliances via computer. However, it cannot be controlled from remote places.

Objective(s) / Aim(s) / Target(s)

- Operating home appliances through mobile phones using voice commands.
- Making a connection between mobile phone and the microcontroller to operate electronic appliances.

151. Social Event Organizer

Project Advisor	Amina Mukhtar	Status	Complete
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Event organizer is a system that let users to create an event at desired location and invite people. Thus people can see the events and join them. There are many android applications like ‘Nearify’ that allow user to search events at a specific location.’Nearify’ mobile application does not let user to do event based group chat and share experience after the execution of event. There should be a proper event organizer application where number of people can join events according to their interests. This event organizer must be able to facilitate its user by allowing them to do event based group chat and individual chat. These applications allow user to shares photos and videos. Users will receive updates of events via sms.

Features:

- Live group chat
- Photo sharing within chat
- Export chat as a text file share photos,
- Receive event update via sms notifications.

152. Microcontroller based Portable Mini Oscilloscope

Project Advisor	Syed Nisar Ali Bilti
Status	Complete

Oscilloscope is an expensive tool which is generally used to analyze input signals. Oscilloscopes are the integral part of any electrical /electronic lab.

The available oscilloscopes in markets are expensive and bulky in size. The motivation of this project is to make cost effective, portable and user friendly mini oscilloscope, using STM32F4 board with LCD display.

The microcontroller will read the digitized sample from the analog-to-digital (ADC) converter attached to it and plot it to the graphics LCD. The input frequency range of

our proposed oscilloscope is dependent to the speed of particular micro-controller and sampling rate of ADC being used.

The operation will be controlled using keyboard, keypad. The use of graphics LCD is essential for portability the device.

153. Car Diagnostics System

Project Advisor	Dr. Haroon Mehmood
Status	Complete

a car diagnostic system which will provide an efficient mechanism to monitor different components/parts of a car. We want to add our own development interface not used OBD2 interface device. We will also embed different sensors in different parts of the body which will be connected to our arduino board and then Arduino board will communicated those values to our software running on mobile. In the absence of this system, we need to check the status manually. Our system will facilitate the user by providing an automatic system to diagnose the problem in car and it will report the status of different components / body parts of car.

Features:

We will embed our own microcontroller board which will control/monitor the following features:

- Check the temperature of different section/components of the car [1]
- Check the fuel and tell how much travel in city or a long route [3]
- Check the Quantity level like:
 - Level of water coolant [2]
 - Level of engine oil [3]
 - Level of gear oil
- Check the state like: Daytime Running lights, Seat belts, hand break

Optional Features:

- Calculate the distance between your car and in front of your car

154. Android Malware Detection Using Machine Learning

Project Advisor	Raja Khurram Shahzad
Status	Complete

The presence of malware is increasing in android based phones at increasing rate. These malware may affect the privacy of users such as by capturing and transmitting their personal information and cause financial losses such as dialing the premium numbers, stealing credit card or bank information or sending SMS to premium numbers. Current anti-malware techniques are not sufficient for the early detection of malware. They also lack the capability of detecting zero day malware. Thus, efficient techniques are required to detect malwares in an android application.

Objective(s) /

Aim(s)

1. Understanding the current Literature and classifying them in different groups as per understanding.

2. Writing a report and indicating the gap or possible method to address this problem.
3. Analyzing and reverse engineering the android files.
4. Understanding the interesting action present in the Android application files.
5. Differentiating between the benign and malicious action in an application.
6. To implement the suggested solution to address the malware detection in android applications
7. To provide suggested solution as an open source data with a limited data set (if possible).

155. Trumps:

Project Advisor	Kamran Shabbir
Status	Complete

Trumps is a very popular card game which is known as Rung in local circles. Trumps will be developed in android development environment using latest AI (Artificial Intelligence) algorithms to make it competitive and more humanly. This will provide multiplayer optionality using android's communication services.

Features

- Player's profile
- Ranking between friends
- Each player can set a bet in the beginning of game
- VIP deck of cards and table
- Local currency bet

156. Automatic document Clustering:

Project Advisor	Imran Shafique
Status	Complete

Clustering is a technique to help divide particular documents into clusters (categories) using different algorithms. Documents in one cluster should be similar to the other documents in same cluster whereas dissimilar to the documents in other clusters. This will help us analyze the trends in documents. This is a technique for similarity measurement which can be used differently in different fields like, checking the plagiarism among assignment documents. Therefore we aim to keep our tool "Automatic Document Clustering" general, which can be used for multiple purposes (similarity check for research or for plagiarism detection).

The target is to develop a software from scratch so that we can exercise what we have learned in our BSCS course. This project will give us confidence and knowledge from software development point of view. We are focusing on building a tool that is simple and is easily available for everyone. Our tool will be doing automatic clustering using the above proposed algorithm; our implementation will work well with text files however files with symbols and numbers will also be entertained but these numbers will be considered as text data. Our aim is to provide such technique which will be beneficial and efficient for the users of different domain.

157. Conceptualized Quranic Search Tool

Project Advisor	Raja Khurram Shahzad
Status	Complete

The Holy Quran has been a source of guidance from 1400 years regarding every aspect of life. A lot of research and work is done to figure out the keyword search aspect from Holy Quran. A number of efforts have been done but they still lack in the semantically searching ability. In this Project we are encouraged to work for the Ontology Based Semantic Search tool for the Holy Quran. This system will enable the user to extract the information out for verses, semantically based on their query from Holy Quran. This System has the positive ability that timing and accuracy for searching is not same all the time which makes it a perfect evolutionary concept based search tool for the Holy Quran. Our Search System will answer the questions asked in natural language by the user from Holy Quran keeping in view the Semantic ontology.

158. Smart Oven

Project Advisor	Dr, Muhshraf Hanif
Status	Complete

Smart oven, will control the temperature settings for baking according to different food items. Integrated with Embedded controllers that can control the electric supply needed to heat the heating element and will show all the readings on a display. The oven will also have an option of operating through mobile application. Few features/Objectives are:

- Our system will bake the food based on selected food type.
- Weight/quantity will be determined by using weight sensors.
- To control the temperature and cooking time according to the type and quality of the food being cooked.
- To provide live monitoring of food baking through connectivity of embedded server and mobile application.
- To make the oven risk free and fault tolerant.

159. Fitness Tracking System

Project Advisor	Kamran Shabbir
Status	Complete

project will address to the problem of increasing obesity among the population of Pakistan in particular. It will help creating awareness among the people regarding their routine diet and encourage them to be more physically active.

Objective(s) / Aim(s) / Target(s)

- A working beta version of the app.
- Efficient counting of steps.
- Determining calories burned and consume.

- Statistical analysis for major parameters regarding a normal exercise or gym base exercise to get results.
- Generating comprehensive health reports.
- Fully functional database associated with the app. We will develop the Database according to our need.
- Web-Service linked with the App.
- A wearable (android smart watch with heartbeat tracking) successfully integrated with the app.

160. Virtual Research Assistant

Project Advisor	Dr. Ahmad Shabbar Kazmi
Status	Complete

VRA is a software application that a user can use for specific research papers and download the relevant papers based on a research criteria. VRA automatically searches the relevant research sites such as IEEE for the research papers and download the relevant papers according to the research criteria. Furthermore summaries of the downloaded papers are created and organized according to a best read sequence. These summaries are emailed to the user.

161. Silent Darkness

Project Advisor	Khuwaja Muhammad Fahd
Status	Complete

This game will be a horror story based game. The location this game will be played in, will be University of Central Punjab. Game will be created for Android and IOS devices and will be uploaded for download after completion.

There will be 4 modes in the game. Main mode will be 3D first person shooting mode. In this mode you will be able to interact with your surroundings, move freely around the campus, visiting different locations of the campus. Second mode will be first person running mode similar to subway surfer [1] or into the dead [2]. In this mode there will be some enemy chasing you and you will make your way through different locations of campus like lobby or corridors and get to some targeted place. Third view will be a puzzle solver mode, in which you will have to solve the given puzzle similar to open doors [3]. Last mode will be 2D objective base game mode. It will be 2D simple game connected with the main story.

162. Kids Learning Game

Project Advisor	Asim Zafar
Status	Complete

Games are very popular among kids but the existing games do not help kids to learn with fun. Also some of the existing learning games do not create interest among kids due to less attractive interface as these games use static background and simple pictures for kids learning. So we are going to make a learning game, which would help kids to learn in a better and more interesting way, with the help of animations [8] and 3D graphics. It would also help kids to create sense of competition among each other.

For new user we will take the user name and save in our online server with unique ID which will define automatically. There will be different complexity questions and exercises for different age level. We will divide age level in three portions. 1-3, 3-5 and 5-7.

Kids can do exercises, challenge another kid and check its score results. We will use good hearing voices, beautiful images and interface for kids. We are motivated because it will make us happy that by our application; kids will start learning from very early age and can challenge each other in the city.

163. Fighters of Crime

Project Advisor	Waseem Aslam
Status	Complete

Fighter's of crime is a First Person Shooter Multiplayer game. It is based on 3-D environment, the environment we will be providing in this game are different locations of UCP. This game will be developed for windows platform. We will make this game interesting by using different weapons and different strategies used in real life.

The game will be composed of two teams **Allies and Axis**. Each team will consist of three different types of characters which will include **Teachers, Guards and Students**. The user will have the option to choose the different maps of UCP that will include the **Courtyard, First floor and Faculty Rooms** each map will have its own uniqueness. User will be offered two types of game modes which include **TDM** (Team Death Match) and **CTF** (Capture The Flag).

In **TDM** the Allies can either kill the opposing team or plant two bombs on point A and B of the opposing team's base or guard them until or unless the bomb explode. In **CTF** mode the Axis have to protect their Bases Flag maximum 3 times and the Allies have to steal the opposing teams Flag 3 times in order to win.

If the game is successful it will bring entertainment and the motivation for the students for all over the world especially the students of UCP.

164. Go professional

Project Advisor	Dr. Ahmad Shabbar Kazmi
Status	Complete

In this project we are proposing a web application that will allow community to read, review, rate, and post on Products and Services. GoProfessional enable users to review on products and services by commenting, likes and others items of interest.

- An application that let product owners and professional to publish their work. And allow users to find trusted product and services.

- Our objective is to develop a complete community web application that will allow users to share experience and reviews about products and services. Also provide an opportunity to product owner and professional to market their work.

165. MC-CDMA

Project Advisor	Muhammad Umair
Status	Complete

The MC-CDMA simulator is developed with the ideal experimentation of individual work. The key parameters that may be incorporated are number of bits, to be transmitted, number of carriers, space time coding techniques, transformation methods,[5] Multiple

computational techniques for data extraction at receiver end, multiuser detection methods, automated graphs to check the network performance etc[5] The combination of all these parameters may vary among different experimentations. For example, the incorporated space-time coding method may be distinct in different experiments.[6] There may be such kind of variations in all of the mentioned parameters. So there is a need of simulation tool that may handle all of these changes gently at single place.

166. A Business/Property trading Android Gaming Application.

Project Advisor	Haroon Abdul Waheed
Status	Complete

Build your empire is an android gaming application intended to provide virtual environment of purchasing and selling of property/business. The application is supported by 2d and 3d modeling (major).The application is supported by two modes i.e. system mode while playing with the system (two entities) and multimode with up to four members playing in online configuration. Players will be allowed to play in an environment where each individual will be competing and progressing on the basis of property he/she may own, afterwards he/she may even rent his/her property. The money points are earned through two ways during the gameplay, firstly when the rival player visits the property of competing player and when virtual characters visit the property. Players are assigned the turns through spinner that generates random figures which decide what move to take. The winner amongst the players playing in multimode is upgraded to rank and is awarded with prize money depended on performance. The application will also be able to offer social service, socially integrated with Facebook account where user can post current status of his/her gameplay engaging nonusers to the application.

167. Secured IM

Project Advisor	Amina Mukhtar
Status	Complete

Social messengers are widely used for communication between users. The most commonly used social messenger is Whatsapp that allow users to share information, media and text messages.

Whatsapp informs all the contacts about the joining of the one who newly joins the Whatsapp. But there will be possibility that some users may not want to tell some of their contacts about their joining on what's app. The proposed application will facilitate users with such feature through which they can secure their statuses to some extent. The user can allow or disallow the privacy settings for every contact on his phone book i.e.; only those contacts will be notified by the user who will be allowed by himself. No other contact could see the profile of the user until the user allows this himself. Moreover, user can restrict his contacts to view the specific information only. This will help increase the privacy of the user and his information on the messenger.

The proposed secure social mobile application will facilitate the user with some of the basic features of WhatsApp, along with some new features as:

Multiple Statuses, Private Box, Broadcast Messages, Forward Screen & privacy for the new user's so no one will come to know that he/she joined WhatsApp.

168. Textual Based Video Indexing & Retrieving Software

Project Advisor	Muhammad Irfan Anjum
Status	Complete

Video labeling is a methodology of labeling a video that indicates specific event that occurs in the video. It helps in effective classification and searching of videos. As of now it is being carried out manually by users or administrators. There may be sure occasions in the video for which no labels are available. To take care of this issue we propose a **Textual Content Based Video Indexing and Retrieving System**. This system can index and classify the video focused around the content (English text) showing up in the video. The primary objective of this application is to retrieve specific English artificial text from a video provided by the user. The system will then indexes the video file based on the actual textual content (artificial text) from the video in the database. The database can be scanned for the video containing a particular word and it will return the video title and the time span number that contains the word.

169. Knock Out Enemy

Project Advisor	Muhammad Umer
Status	Complete

3D shooting game with a story on gang war, it is a real world representation on gang vs rangers encounter. The opponents will fight with each other and take medals on his given ranking. In this game the Goal of every mission is to kill that cruel Politician and jump to the next mission... And the other side don mafia have its raking method which is based on his strategy when they want to occupy any region they must kill rangers high ranked caption.

170. Recite: An algorithm to Identify Tajweed (Arabic Phonetics) Errors

Project Advisor	Raja Khurram Shahzad
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Status	Complete
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It is always a challenge to teach a person or a kid another language, which he/she can speak in a native accent. Many languages are dependent upon the sound produced by the speaker, such as Chinese language and Arabic Language. Majority of Muslims learn

Arabic to recite the holy Quran. Many words of Arabic language also change their meaning, if the Tajweed (recitation) rules are not followed. To address this problem, this project aims to build an application, which can help a user in learning Tajweed (phonetics) to recite Quran. The proposed system will be capable of comparing the recorded sounds and indicating the differences (or mismatched) in comparison to store sounds in the database.

171. Performance Enhancement and Implementation of a MANET Routing Protocol in Linux Kernel

Project Advisor	Dr. Nauman Mazhar
Status	Complete

A Mobile AdHoc Network (MANET) is a self-configuring, self-organized, infrastructure-less network of wireless mobile devices. MANET needs a routing protocol to decide routes between the communicating nodes. There are many such routing protocols including DSR, AODV, DSDV and Bee AdHoc protocol. As mobile devices (e.g. laptops) have limited battery power, we need an energy efficient protocol which will enhance network's life cycle, so we are selecting Bee AdHoc protocol which is relatively energy efficient. Bee AdHoc is a nature inspired routing protocol for Mobile AdHoc Networks (MANETS). We seek to further enhance its performance by improving its energy consumption, implementing it in Linux kernel and then carry out testing in Linux test-bed environment.

172. Rise of AIMs

Project Advisor	Khuawaja Muhammad Fahd
Status	Complete

Rise of AIMs (Artificial Intelligent machines) is an android based fighting and strategy game. The story line begin with the fight history of humans and AI machines who have defeated humans in war. Humans are now slaves of AI machines but AI machines want to learn more about functionality of human brain. AI machines have captured many humans, to study their brain, a human (player) will be placed in a specially designed arena (maze). Player will find gold, food and other prisoners in maze. The goal of player is to find food to survive and release other prisoners to whom he can lead. During search in maze, player will encounter AI machines that will fight him. With gold he can build supporting items like shelter and food storage etc. The player will be safe in safe zone and will fight AI machines in maze. However, throughout this process, he is being watched.

173. Image retrieval collaborator

Project Advisor	Saeed Iqbal Khattak
Status	Complete

The main theme of this *research project* is to identify the adult content in a movie or a video clip and blackout or blur that content.

Video itself is a set of still images known as *frames* so any actions which can be performed on images is applicable on videos, there are some limitations though. This project strives to develop a system that performs actions on each frame of a video and classify it as an adult or benign frame. Performing such actions on every frame of a video can increase the storage costs and computational time dramatically but it is still possible.

The system will firstly extract the frames (one at a time) from the video clip after which the data obtained will be classified by performing certain algorithms and the images will be rated and tested against the trained data set for filtration, contrary to which they will be classified as benign or adult. After the identification of an adult frame or a set of adult frames, it will blackout those frames so you can enjoy a family friendly environment.

174. Dynamic Editorial Assistant

Project Advisor	Muhammad Umair
Status	Complete

Journals like HRMars4 are lacking with a centralized system although many journals are working already. In HRMars, when an article is submitted there is no automated platform to check the formatting and plagiarism of that article. They have no automated editorial processing of articles. Many of the Journals are not maintaining the database of reviewers, editors and authors. They face an important issue of timely transaction of articles between authors and reviewers. There is no automated rating system for authors and reviewers with respect to timely response constraint and their articles are non-starred. The same set of problems is to be faced for any kind of editorial process of any journal. The aim is to help accordingly:

Provide an automated registration system.

Provide an automated environment for the authors to post their research articles. Provide proper transfer of rights for articles to editors by copyright release form which will be issued to authors automatically.

Provide automated plagiarism check for the submitted articles using Plagiarism Detection System plugin.

Provide basic formatting check on articles by the help of syntax parser.

Provide handling of database for authors, editors and reviewers for future concerns. Provide an intelligent forwarding engine for the articles to the most appropriate reviewer on the basis of key-words.

Provide an alarm feature as a reminder for the reviewers, authors and a notification feature for the author.

Provide a dynamic evaluation form with a comments box to be sent to reviewers along with each article.

Provide automated rating of articles on the basis of the evaluation form received from reviewers for the acceptance of articles.

- Provide accurately designed rating system for authors and reviewers on the basis of timely response constraint.
- Provide online publication feature.
- Provide related articles to registered users on request on the basis of key-words.

175. Lets Read

Project Advisor	Raja Khurram Shahzad
Status	Complete

Whenever a user provides a query in a search engine, search engine returns a set of results, which consists of different documents, and web pages. However, search results are returned based on the search engine ranking. Previous research has been done on the text document ranking to find and rank documents on the basis of similarity and relevance. However, no particular mechanism for search engine's result is suggested by any researchers. The aim of the project is to develop an algorithm, which suggests the ranking order of webpages returned as a subset of search query from Google. To suggest the ranking order, we aim to use machine learning and statistical tools, which predicts the relevance and similarity of web pages.

Whenever a user enters a query or search string in a search engine a set of search results are returned by the search engine without any suggested reading order. Due to unavailability of a particular reading order user may browse a resource, which is at advanced level and user may require basic knowledge to comprehend the topic. To address this issue for the subset of web documents, we aim to develop an algorithm, which suggests a reading sequence for the subset of search results.

176. Ranking Algorithm

Project Advisor	Raja Khurram Shahzad
Status	Complete

177. CRM system for Complaint Management

Project Advisor	Amina Mukhtar
Status	Complete

178. Real Time Multiple Vehicle Number Plate Identification System for UCP

Project Advisor	Mr. Usman Afzal
Status	Complete

179. SMART DOOR BELL

Project Advisor	Mr. Mehran Rasheed / Ms. Samia Asloob
Status	Complete

180. FOREST ESCAPE

Project Advisor	Ms. Farah Naaz
Status	Complete

181. HOME DÉCOR

Project Advisor	Mr. Mustafa Hassan
Status	Complete

182. SMART PLANNER

Project Advisor	Mr. Imran Arshad
Status	Complete

183. ROBOCOACH

Project Advisor	Dr. Musharraf Hanif
Status	Complete

184. Autonomous Wheel Chair

Project Advisor	Dr. Atif Mehdi
Status	Complete

185. THE SMART CHEF

Project Advisor	Mr. Imran Arshad
Status	Complete

186. FYP PORTAL

Project Advisor	Mr. Imran Arshad
Status	Complete

187. PS PAINTBALL SHOOTING BOT

Project Advisor	Mr. Haroon A Waheed
Status	Complete

188. FINANCIAL MANGAMENT SYSTEM

Project Advisor	Mr. Kamran Shabbir
Status	Complete

189. Enhancing Quality of DTN Protocol

Project Advisor	Mr. Saeed Iqbal
Status	Complete

190. ELIGIBILITY FINDER

Project Advisor	Mr. Saeed Iqbal
Status	Complete

191. SMART REMOTE CONTROLLER

Project Advisor	Dr. Sarwar Ehsan
Status	Complete

192. GESTURE BASED 3D CRICKET USING KINECT

Project Advisor	Mr. Zaid Munir
Status	Complete

193. I SEC

Project Advisor	Mr. Haroon A Waheed
Status	Complete

194. MOSIKAAR

Project Advisor	Mr. Kamran Shabbir
Status	Complete

195. SHAHMUKHI GURMUKHI INTERCONVERT (SGI SYSTEM)

Project Advisor	Mr. Rehan Abbas
Status	Complete

196. ANDROID BASED TEXT TO SPEECH APP

Project Advisor	Mr. Rehan Abbas
Status	Complete

197. I code

Project Advisor	Mr. Khawaja Fahd/ Mr. Liquat Majeed
Status	Complete

198. TOWARDS ENGLISH TO URDU MACHINE TRANSLATION

Project Advisor	Dr. Amjad Iqbal
Status	Complete

199. I-MANAGEMENT

Project Advisor	Ms. Moomal Qureshi
Status	Complete

200. SPEEDY RICKSHAW RACING 3D

Project Advisor	Ms. Farah Naaz
Status	Complete

201. IMAGE STORY TELLER

Project Advisor	Ms. Farah Naaz
Status	Complete

202. FOODAHOLIC

Project Advisor	Mr. Mustafa Hassan
Status	Complete

203. Android Based Bscs game

Project Advisor	Mr. Faisal Masud
Status	Complete

204. ANDROID APP CONTROL CAR

Project Advisor	Mr. Rehan Abbas
Status	Complete

205. OPEN SOURCE AUDIO /VIDEO /TEXT CONVERSION SDK/API FOR ANDROID

Project Advisor	Dr. Nauman Mazhar
Status	Complete

206. WISHLIST

Project Advisor	Mr. Muhammad Umair / Mr. Awais Lodhi
Status	Complete

207. FC-UCP

Project Advisor	Dr. Musharraf Hanif
Status	Complete

208. Virtual Home

Project Advisor	Mr. Zaid Munir
Status	Complete

209. CHAT ENCRYPTION SOFTWARE

Project Advisor	Dr. Nauman Mazhar
Status	Complete

210. HDMI TO WIFI STREAMER (ANDROID DEVICE)

Project Advisor	Mr. Adnan Ghafoor
Status	Complete

211. NEWS BOARD WEB APPLICATION

Project Advisor	Dr. Amjad Iqbal
Status	Complete

212. 3D DRIVING SIMULATOR

Project Advisor	Mr. Imran Arshad
Status	Complete

213. SUPPLIER'S ASSIST

Project Advisor	Mr. Haroon A Waheed
Status	Complete

214. Wireless doorbell system for impaired persons

Project Advisor	Mr. Adnan Ghafoor
Status	Complete

215. Freedom Race

Project Advisor	Mr. Awais Lodhi
Status	Complete

216. PROFIT MANAGER

Project Advisor	Mr. Bilal Arshad/Ms. Samia Asloob
Status	Complete

217. Android Genie

Project Advisor	Bilal Arshad
Status	Complete

218. Advanced Metering Infrastructure

Project Advisor	Bilal Arshad
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Status	Complete
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219. Omni Channel Merchant Solutions

Project Advisor	Usman Afzal
Status	Complete

220. H-Life

Project Advisor	Ather Suleman
Status	Complete

221. Urdu Text Summarizer

Project Advisor	Muhammad Umair
Status	Complete

222. Realtime ECG Gadget

Project Advisor	Dr. Oumair Naseer
Status	Complete

223. Relational Algebra Query Calculator

Project Advisor	Awais Lodhi
Status	Complete

224. Schedule Generation using Constraint Programming

Project Advisor	Samina Akram
Status	Complete

225. 3D Mapping for Drone using single IP Camera

Project Advisor	Dr. Oumair Naseer
Status	Complete

226. Autonomous Map Generator and Navigator

Project Advisor	Nisar Balti
Status	Complete

227. HR Assist

Project Advisor	Usman Afzal
Status	Complete

228. Android CPU Governors and their Effectiveness

Project Advisor	Awais Lodhi
Status	Complete

229. P2P Blood Donation App

Project Advisor	Haroon A Waheed
Status	Complete

230. LAN based Mobile Application

Project Advisor	Bilal Arshad
Status	Complete

231. Accelerometer based Handwriting Recognition System

Project Advisor	Adnan Ghafoor
Status	Complete

232. Gesture Controlled Accelerometer based Input Device

Project Advisor	Adnan Ghafoor
Status	Complete

233. Foodoholics

Project Advisor	Farah Naaz
Status	Complete

234. Equation Solver

Project Advisor	Muhammad Umair
Status	Complete

235. Urdu Text to Speech Application (UTSA)

Project Advisor	Usman Afzal
Status	Complete

236. FPGA based Stand Alone Computer

Project Advisor	Adnan Ghafoor
Status	Complete

237. Studnav System

Project Advisor	Kamran Shabbir
Status	Complete

238. Sales Alert

Project Advisor	Usman Afzal
Status	Complete

239. Text Scanning Android App

Project Advisor	Muhammad Umair
Status	Complete

240. Gurumukhi to Phonetic Script

Project Advisor	Rehan Abbas
Status	Complete

241. Development of a Virtual Reality based Magnifier Application for Android

Project Advisor	Dr. Furqan Ullah
Status	Complete

242. Closed Command Set Voice Controlled Robot

Project Advisor	Dr. Oumair Naseer
Status	Complete

243. Android Java Animator

Project Advisor	Mustafa Hassan
Status	Complete

244. Amblyopia Vision Treatment Game

Project Advisor	Zaid Munir
Status	Complete

245. Aid for Deaf

Project Advisor	Dr. Sarwar Ehsan
Status	Complete

246. Society Facilitation Hub with Android App

Project Advisor	Faisal Masood
Status	Complete

247. Voice Recognition

Project Advisor	Dr. Amjad Iqbal
Status	Complete

248. Text to Speech for Punjabi

Project Advisor	Rehan Abbas
Status	Complete

249. Smart Fuel Manager

Project Advisor	Saeed Iqbal
Status	Complete

250. Custom Shopping Website

Project Advisor	Haroon A Waheed
Status	Complete

251. Fashion Advisor

Project Advisor	Muhammad Umair
Status	Complete

252. Product Recommendation System

Project Advisor	Imran Arshad
Status	Complete

253. AERIAL PEST DETECTION

Project Advisor	DR. YASIR NIAZ KHAN/ DR. ATIF MEHDI
Status	Complete

254. AUTONOMOUS FLYING ROBOT FOR SURVEILLANCE

Project Advisor	DR. YASIR NIAZ KHAN/ DR. ATIF MEHDI
Status	Complete

255. SURVEILLANCE ROBOT

Project Advisor	DR. YASIR NIAZ KHAN/ DR. ATIF MEHDI
Status	Complete

256. GARDENING ROBOT

Project Advisor	DR. YASIR NIAZ KHAN/ DR. ATIF MEHDI
Status	Complete

257. SMART HELMET

Project Advisor	DR. YASIR NIAZ KHAN / MR. ADNAN GHAFOOR
Status	Complete

258. SECURITY FLYING ROBOT WITH FACE RECOGNITION

Project Advisor	DR. YASIR NIAZ KHAN/ DR. ATIF MEHDI
Status	Complete

259. INTELLIGENT WAITER ROBOT

Project Advisor	DR. YASIR NIAZ KHAN/ DR. ATIF MEHDI
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Status	Complete
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260. IMAGE RECOGNITION AND IT'S ANALYSIS

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

261. AUTOMATIC PARKING PLACE LOCATOR

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

262. INDOOR NAVIGATION SYSTEM

Project Advisor	DR. YASIR NIAZ KHAN / MR. REHAN ABBAS
Status	Complete

263. FYP EVALUATOR

Project Advisor	MR. SAEED IQBAL
Status	Complete

264. FREGGIE NOTIFIER

Project Advisor	MR. SAEED IQBAL
Status	Complete

265. CONTENT WISE VIDEO CLUSTERING

Project Advisor	MR. SAEED IQBAL
Status	Complete

266. AD'S CAFÉ

Project Advisor	MR. SAEED IQBAL
Status	Complete

267. ROAD TRAFFIC MONITORING SYSTEM

Project Advisor	MR. SAEED IQBAL
Status	Complete

268. UCP COMMUNICATOR APP (UCA)

Project Advisor	MR. FAISAL MASUD
Status	Complete

269. CONTENT MANAGEMENT SYSTEM

Project Advisor	MR. FAISAL MASUD
Status	Complete

270. ACCOMMODATION FINDER

Project Advisor	MR. FAISAL MASUD
Status	Complete

271. EVENT NOTIFIER

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

272. ACTIVITY DETECTOR

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

**273. DEVELOPMENT OF PLATFORM INDEPENDENT TEXT EXTRACTION
SOFTWRAE APPLICATION**

Project Advisor	DR. FURQAN ULLAH
Status	Complete

274. SIGN LANGUAGE TO SPEECH

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

275. EMAIL TO SMS SYSTEM

Project Advisor	MR. HAROON ABDUL WAHEED
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Status	Complete
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276. ONLINE FACE TRAINING AND RECOGNITION SYSTEM

Project Advisor	MR. ZAID MUNIR
Status	Complete

277. INTUITO-COPTER

Project Advisor	MR. ZAID MUNIR
Status	Complete

278. SUNFLOWER SOLAR PANEL

Project Advisor	MR. ZAID MUNIR
Status	Complete

279. AUTOMATED TRAFFIC CONTROL SYSTEM (ATCS) BASED ON COMPUTER VISION

Project Advisor	MR. ZAID MUNIR
Status	Complete

280. NEWS CONTROLLER BOT

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD
Status	Complete

281. MALWARE DETECTION USING MACHINE LEARNING

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD
Status	Complete

282. ACADEMIC SEARCH ENGINE II

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD
Status	Complete

283. WEB BASED ACADEMIC SEARCH ENGINE

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD
Status	Complete

284. PHOTOLANCER

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD
Status	Complete

285. HOME AUTOMATION WITH E-BILLING

Project Advisor	MS. FARAH NAZ RAZA
Status	Complete

286. CYBER CRIME REPORTING SYSTEM

Project Advisor	MS. FARAH NAZ RAZA
Status	Complete

287. HOME AUTOMATION AND SECURITY SYSTEM

Project Advisor	MS. FARAH NAZ RAZA
Status	Complete

288. ENSURING SECURITY WITH QUAD COPTER

Project Advisor	MS. FARAH NAZ RAZA
Status	Complete

289. AUTOBOT

Project Advisor	MR. MOHSIN ABBAS / MR. HAROON ABDUL WAHEED
Status	Complete

290. FOLLOW ME

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

291. URDU SENTIMENT ANALYZER

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

292. EVALUATION OF COMPLEXITY AND READABILITY OF TEXT

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

293. REMOTE ACCESS TORJAN (RAT)

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

294. VIRTUAL TROLLEY

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

295. PRISONER BREAK

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

296. PULSOMETER

Project Advisor	MR. MUHAMMAD UMAIR
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Status	Complete
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297. MOCKBOARD (MOBILE PROTOTYPE DESIGNER WEBSITE)

Project Advisor	MR. MUHAMMAD UMAIR
Status	Complete

298. COMBUSTIBLE GAS LEAKAGE AND SMOKE DETECTION SYSTEM

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

299. ZOMBIE ECLIPSE (A VIRTUAL REALITY BASED FIRST PERSON SHOOTER GAME)

Project Advisor	DR. ZEECHAN ALI RANA
Status	Complete

300. SOCIETY ALLIANCE

Project Advisor	DR. ZEECHAN ALI RANA
Status	Complete

301. ZM2 CRM

Project Advisor	MR. AWAIS MUHAMMAD LODHI
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Status	Complete
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302. CUTTLEFISH (ZEDOX ETL)

Project Advisor	MR. AWAIS MUHAMMAD LODHI
Status	Complete

303. BIKES BATTLE

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

304. BARE FOOT (RUNNER GAME)

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

305. WEB APP GENERATOR

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

306. ZOMBIES IN UCP (ZIU)

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

307. VIRTUAL DISTANT LEARNING (VDL)

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

308. 3D SHAPE MEASUREMENT USING ACTIVE STEREO VISION TECHNOLOGY

Project Advisor	DR. FURQAN ULLAH
Status	Complete

309. DEVELOPMENT OF A SURVIVAL 3D GAME USING VIRTUAL REALITY

Project Advisor	DR. FURQAN ULLAH
Status	Complete

310. DEVELOPMENT OF A SOFTWARE APPLICATION FOR MEDICAL IMAGING ANALYSIS AND VISUALIZATION

Project Advisor	DR. FURQAN ULLAH
Status	Complete

311. MATHS FOR KIDS LEARNING GAME

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

312. PUNJABI SPEECH TO TEXT SYNTHESIZER

Project Advisor	MR. REHAN ABBAS
Status	Complete

313. AI ENGINE FOR ROBO AND ROBOTIC ARM

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

314. NON-INVASIVE ESTIMATION OF BONE FRACTURE AND PROGRESS OF HEALING

Project Advisor	DR. ADNAN QURESHI
Status	Complete

315. MATH OF SHAPES

Project Advisor	DR. ASHRAF IQBAL / MR. SARFRAZ RAZA
Status	Complete

316. GRABBING ROBOTIC ARM USING DESKTOP INTERFACE

Project Advisor	Dr. Oumair Naseer
Status	Complete

317. USB 3.0 COMPLAINT PEER TO PEER COMMUNICATION SYSTEM

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

318. VULNERABILITY/ THREAT ANALYZER

Project Advisor	MR. AWAIS MUHAMMAD LODHI/ MR. RAJA M. KHURRAM
Status	Complete

319. SECURITY ENHANCEMENT AND ADAPTIVE QUIZ IN LMS

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

320. SALON MANAGEMENT SYSTEM

Project Advisor	MR. FAISAL MASUD
Status	Complete

321. ULTIMATE PC CONTROLLER

Project Advisor	DR. ZEESHAN ALI RANA
Status	Complete

322. WORLDWIDE HOME CONTROLLER

Project Advisor	DR. OUMAIR NASEER
Status	Complete

323. TEAM-X

Project Advisor	MR. SAEED IQBAL
Status	Complete

324. QUESTRA CHAT

Project Advisor	MS. FARAH NAZ
Status	Complete

325. ONENEWSHUB

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

326. SEEK

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

327. SMS-SHARE ME SAFELY

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

328. DOCTRINA

Project Advisor	MR. MUHAMMAD USMAN AFZAL
Status	Complete

329. HUMAN RESOURCE MANAGEMENT SYSTEM

Project Advisor	MR. AWAIS MUHAMMAD LODHI
Status	Complete

330. DEFEND THE EARTH

Project Advisor	MR. AWAIS MUHAMMAD LODHI
Status	Complete

331. SPARK EYE

Project Advisor	MR. AWAIS MUHAMMAD LODHI
Status	Complete

332. CAMPUS BASED CONSUMER BUSINESS (GO GET IT (GGT))

Project Advisor	MR. AWAIS MUHAMMAD LODHI
Status	Complete

333. HAIR TRAIT

Project Advisor	MR. MUHAMMAD UMAIR
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Status	Complete
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334. VERIZE

Project Advisor	MR. MUHAMMAD UMAIR
Status	Complete

335. SOUNDIFY

Project Advisor	MR. MUHAMMAD UMAIR
Status	Complete

336. PARENTAL CONTROL APP

Project Advisor	MR. REHAN ABBAS
Status	Complete

337. EARTH APOCALYPSE

Project Advisor	MR. REHAN ABBAS
Status	Complete

338. CARDIAC DISEASE PREDICTION USING AUTOMATED DETECTION OF ARRHYTHMIAS

Project Advisor	MR. REHAN ABBAS
Status	Complete

339. AUGMENTED REALITY BASED INTERIOR DESIGNING TOOL

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

340. ANPR (AUTOMATIC NUMBER PLATE RECOGNITION)

Project Advisor	MR. SAEED IQBAL
Status	Complete

341. RESCUE ME

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

342. BRANDS BUCKET

Project Advisor	MR. SAEED IQBAL
Status	Complete

343. AR TREASURE HUNT IN UCP

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

344. AUCTION.PK

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

345. ANOMALY DETECTION

Project Advisor	MR. MUHAMMAD USMAN AFZAL
Status	Complete

346. EASY CARD

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

347. HUMANOID ROBOT

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

348. CARDS GAME IN AUGMENTED REALITY

Project Advisor	MS. AMINA MUKHTAR
Status	Complete

349. RESIDENTIAL COUNSELOR

Project Advisor	MS. AMINA MUKHTAR
Status	Complete

350. SNAP APP

Project Advisor	MS. AMINA MUKHTAR
Status	Complete

351. SURVIVAL SPAN

Project Advisor	MS. FARAH NAZ
Status	Complete

352. STRESS RELIEVER

Project Advisor	MS. FARAH NAZ
Status	Complete

353. CINEREFERS

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

354. ZOMBIES IN TOWN

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

355. INTERACTIVE LEARNING FOR KIDS

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

356. HOUSE OF BRANDS

Project Advisor	MR. HAROON ABDUL WAHEED
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Status	Complete
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357. ANDROID STUDENTS PORTAL (ASP)

Project Advisor	MS. SAMIA ASLOOB
Status	Complete

358. VIRTUAL REALITY DRIVING SIMULATOR

Project Advisor	MS. SAMIA ASLOOB
Status	Complete

359. QUIX JOB

Project Advisor	MS. SAMIA ASLOOB
Status	Complete

360. AUTOMATED ATTENDANCE SYSTEM

Project Advisor	MS. SADAF BALOCH
Status	Complete

361. THE GHOST AGENT

Project Advisor	MS. SADAF BALOCH
Status	Complete

362. HOUSE HOLD SERVICE PROVIDER

Project Advisor	MS. SADAF BALOCH
Status	Complete

363. BLIND AUDIO GUIDENCE SYSTEM

Project Advisor	MR. ADNAN GHAFOR
Status	Complete

364. MOBILE HEALTH UNIT

Project Advisor	MS. SADAF BALOCH
Status	Complete

365. MATH HUB

Project Advisor	MR. SAJID HUSSAIN
Status	Complete

366. ORDEREASE

Project Advisor	MR. SAEED IQBAL
Status	Complete

367. UNDERSTANDING OF HUMAN ACTIONS FOR SMART VEHICLES

Project Advisor	MR. SAEED IQBAL
Status	Complete

368. HYREMEI

Project Advisor	MR. SAEED IQBAL
Status	Complete

369. SKIN CANCER DETECTOR

Project Advisor	MR. SAEED IQBAL
Status	Complete

370. SCHOOL ADVISOR

Project Advisor	MR. SAEED IQBAL
Status	Complete

371. TENANTS SPAN

Project Advisor	MR. SAEED IQBAL
Status	Complete

372. GOCART

Project Advisor	MR. SAEED IQBAL
Status	Complete

373. AGRICULTURE IOT

Project Advisor	MR. SAEED IQBAL
Status	Complete

374. EVENT TECH

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

375. DREAM PLACE APP

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

376. PRO-CONNECT

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

377. CONVENE

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

378. FINGERPRINT SCANNING AUTOMATED ATTENDANCE SYSTEM

Project Advisor	MS. FARAH NAAZ
Status	Complete

379. UCP NOTIFIER

Project Advisor	MS. FARAH NAAZ
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Status	Complete
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380. SMART BOT

Project Advisor	MR. SAEED IQBAL
Status	Complete

381. PROGRAMMING SCHOOL

Project Advisor	MS. FARAH NAAZ
Status	Complete

382. SMART TRAINER

Project Advisor	MS. FARAH NAAZ
Status	Complete

383. HOME VALUE PREDICTOR

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

384. ENVIRONMENTAL MONITORING SYSTEM

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

385. EJECTION FRACTION ESTIMATION USING MRI CINE SEQUENCE

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

386. VIRTUAL STRIKE

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

387. NOTIFIER APP

Project Advisor	MR. REHAN ABBAS
Status	Complete

388. PHONETIC ENGLISH

Project Advisor	MR. REHAN ABBAS
Status	Complete

389. TOP BINS- A SPORTS SOCIAL NETWORK

Project Advisor	MR. REHAN ABBAS
Status	Complete

390. UNIVERSITY SOCIETIES MANAGEMENT SYSTEM

Project Advisor	MR. REHAN ABBAS
Status	Complete

391. EARLY WARNING ANTI-THEFT SYSTEM

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

392. LAB MANAGEMENT SYSTEM

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

393. REAL-TIME OPERATING SYSTEM FOR STM BASED MICRO-CONTROLLER

Project Advisor	MR. ADNAN GHAFOOR
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Status	Complete
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394. PROGRAMMABLE MULTI-PURPOSE QUAD COPTER

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

395. ONRISE (ONLINE REGISTRATION SYSTEM FOR INTERMEDIATE AND SECONDARY EDUCATION)

Project Advisor	DR. ZEESHAN ALI RANA
Status	Complete

396. MUSAFIR

Project Advisor	DR. ZEESHAN ALI RANA
Status	Complete

397. BUILDING NAVIGATION SYSTEM

Project Advisor	MR. REHAN ABBAS
Status	Complete

398. TELEPRESENCE ROBOT

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

399. AUTONOMOUS NAVIGATION IN OCTACOPTER

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

400. USING HAND GESTURES TO CONTROL DRONE

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

401. LAN MESSENGER APPLICATION

Project Advisor	MR. FAISAL MASUD SHEIKH
Status	Complete

402. CRIME CITY

Project Advisor	MR. FAISAL MASUD SHEIKH
Status	Complete

403. RACING FIGHTERS (RF)

Project Advisor	MR. REHAN ABBAS
Status	Complete

404. FORMATIVE FEEDBACKER

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

405. DERBY DEMOLITION

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

406. AUTOMATIC ESSAY SCORING (AES)

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

407. CONTEXT, SIMILARITY AND RELATEDNESS OF DOCUMENTS

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

408. PLAYING PAC-MAN WITH DEEPEP REINFORCEMENT LEARNING

Project Advisor	MR. MUHAMMAD MUDASSIR KHAN
Status	Complete

409. TRAIN LEVEL CROSSING STATUS DETECTION SUING MACHINE LEARNING

Project Advisor	MR. MUHAMMAD MUDASSIR KHAN
Status	Complete

410. LEARNING BASED AUTOMATED HUMAN TRACKING SYSTEM

Project Advisor	DR. ADNAN N QURESHI/ MR. SAEED IQBAL
Status	Complete

411. TWO WAY TRAFFIC COLLISION AVOIDANCE IN AUTONOMOUS VEHICLES

Project Advisor	MR. KAMRAN SHABBIR/ MR. SAEED IQBAL
Status	Complete

412. MUX ACCOUNTING

Project Advisor	MR. MUHAMMAD UMAIR
Status	Complete

413. PROJECT LIFE LINE

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

414. MY DISCUSSION ROOM

Project Advisor	MS. SADAF BALOCH
Status	Complete

415. WORD SEGMENTATION IN URDU USING SEMI SUPERVISED LEARNING

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

416. AUTONOMOUS CAR

Project Advisor	DR. OUMAIR NASEER
Status	Complete

417. AIRLINE RESERVATION AND MANAGEMENT SYSTEM

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

418. DEMON HUNTER

Project Advisor	MR. IRFAN ANJUM
Status	Complete

419. MEDI-BED

Project Advisor	DR. HIFSA SHAHID
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Status	Complete
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420. FOODIE HIGHWAY

Project Advisor	MR. NABEEL AHSAN
Status	Complete

421. E-LEARN

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

422. INTELLIGENT HOME MANAGEMENT

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

423. THE INDEX

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

424. CAR ADVISOR APP

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

425. CRYPTACT- SMART CONTRACTS

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

426. CRYPTO PUPPIES

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

427. HOME AUTOMATION

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

It is very difficult for some disable or old people and others sleeping at night to wake up and move all over in the house to shutoff lights, doors and windows etc. So, our goal will be to control this whole home system along with providing security services using the mobile application. Although such applications have been introduced worldwide but there is not such an app which is collectively controlling all the things. Our goal is to combine all these apps and merge them into a single app which will provide security and surveillance including all other home automation safety features. Home automation system represent the front-end of smart grids, where the energy monitoring and control

operations are enabled through smart devices installed in households and residential buildings. There are many home automation technologies available in the market, and users are left to select their choice of best technology. X, Z-Wave, ZigBee, INSTEON and EnOcean are the home automation technologies compared in this paper.

428. ULTRASONIC BLIND WALKING STICK

Project Advisor	DR. OUMAIR NASEER
Status	Complete

429. AUTO DRONE WITH DYNAMIC FLIGHT

Project Advisor	DR. OUMAIR NASEER
Status	Complete

430. E-SMART MUG

Project Advisor	DR. OUMAIR NASEER
Status	Complete

431. SMART BILLING

Project Advisor	DR. OUMAIR NASEER
Status	Complete

432. HOSIERY MANAGEMENT SYSTEM

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

433. SNACK THAT!

Project Advisor	MR. WASEEM ASLAM
Status	Complete

434. TRAVEL MAESTRO

Project Advisor	MR. M. USMAN AFZAL/MR. NABEEL AHSAN
Status	Complete

435. ROBO FUN

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

436. AUTOMATED VACUUM CLEANER

Project Advisor	MR. AHMED ABD E MUNEEB
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Status	Complete
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437. AUTONOMOUS SEEDER

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

438. INTELLIGENT ESSAY LEARNING

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

439. CONCEPTUAL DEPICTION OF ENGLISH ESSAYS

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

440. SMOG ASSISTANCE SYSTEM (SAS)

Project Advisor	MR. IRFAN ANJUM
Status	Complete

441. TOOL MAN

Project Advisor	MR. IRFAN ANJUM
Status	Complete

442. FUZZIX

Project Advisor	MR. ASIM RAZA
Status	Complete

443. BLOCKED SHIPPED

Project Advisor	MR. ZAID MUNIR
Status	Complete

444. BLOCKCHAIN BASED SMART ATTESTATION

Project Advisor	MR. ZAID MUNIR
Status	Complete

445. SMART DMV (DEPARTMENT OF MOTOR VEHICLE)

Project Advisor	MR. ZAID MUNIR
Status	Complete

446. DIGITAL IDENTITY USING BLOCKCHAIN

Project Advisor	MR. ZAID MUNIR
Status	Complete

447. SECURE LAND OWNERSHIP THROUGH BLOCKCHAIN

Project Advisor	MR. ZAID MUNIR
Status	Complete

448. BOOKAWAY

Project Advisor	Ms. SADAF BALOACH
Status	Complete

449. WEBPEER

Project Advisor	Ms. SADAF BALOACH
Status	Complete

450. MULTI-USER SYSTEM FOR CONDUCTING AND ORGANIZING TOURNAMENTS (MusCOT)

Project Advisor	DR. ZEECHAN ALI RANA/MS. NAMRA SHEIKH
Status	Complete

451. DETECTING INAPPROPRIATE CONTENT IN VIDEO STREAM

Project Advisor	DR. ZEECHAN ALI RANA
Status	Complete

452. GUI BASED MICROCONTROLLER PROGRAMMER

Project Advisor	MR. ADNAN GHAFOOR
Status	Complete

453. E-NEWS ALERT

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

454. 3D ENDLESS RUNNER GAME

Project Advisor	MR. M. SHIBLI MANSURI
Status	Complete

455. ONLINE MASSIHA

Project Advisor	MR. IRFAN ANJUM
Status	Complete

456. MY BOOK STORE

Project Advisor	MS. SAMINA AKRAM
Status	Complete

457. ACCIDENT TRACKING AND ALERT SYSTEM

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

458. VOICE BASED QUERY PROCESSING

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

459. 3D-BANDAR KILLA

Project Advisor	MR. ASIM RAZA
Status	Complete

Currently, our cultural games (or desi games) are not played any more reasons like growing urbanization, lack of playgrounds, and threat of terrorism. We intend to develop one of the well-known desi games known as Bandar-Killa for mobile game users as well as for virtual reality community. Our motivation comes from existing nostalgia for this games and by developing such a game, we hope to contribute in the preservation of local culture in our capacity. One significant feature of our project is that to the best of our knowledge, development of Bandar-Killa is being proposed for the first time for the huge audience of South Asia.

460. AUTOMATIC ROMAN TO URDU SCRIPT TRANSLITERATOR & TOKENIZER

Project Advisor	MR. ASIM RAZA
Status	Complete

Automatic Language Summarizer is a web based application that uses Natural Language Processing to give the summarized output from a text. It is a solution when one does not want to read or go through the whole text. This tool will help to extract the summary and gives précis of the text.

Text Summarization is based on advanced Natural Language Processing and Machine Learning technologies, and it belongs to automatic text summarization and can be used to summarize text from paragraph that user provided.

461. PITTU GARAM

Project Advisor	MR. ASIM RAZA
Status	Complete

Seven stones, traditionally known as Pittu Garam is a traditional South Asian game played between two teams. The game requires a tennis ball and set of seven stones which can be stacked up to form a small tower. The aim of the game is to be able to break the tower and then rebuild it before getting hit by one of the opponent.

462. DOBBY

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

We are going to do a hardware-based project and make a robot who can move with our voice command like turn left, right, forward, backward. It will also sense the feasibility of movement that if there is any hurdle/obstacle and can he pass that hurdle or not? We will use a computer which will store our program and connects different parts of the robot and give outputs for different parts of machine after doing compilation.

463. SPEECH RECOGNIZED AUTONOMOUS WHEELCHAIR

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

In this project, we aim to create a smart wheelchair for physically handicapped persons especially for those people who cannot drive manual or joystick-equipped wheelchairs. We plan to integrate this wheelchair with Speech recognition technology as well as, semi-autonomous functionalities such as self-driving with obstacles detections. The user can either give Voice commands or he/she can choose the destination on pre-defined map. We intend to implement this project in UCP.

464. BRAIN TUMOR AND CLOT DETECTION USING PARALLEL COMPUTING

Project Advisor	MR. DANISH ARIF / MR. SYED NISAR BALTI
Status	Complete

In country like Pakistan where there is a huge ratio between population and medical facilities available. If patient get the CT scan done, then he/she has to wait for a long time to get the report. It is due to the shortage of radiologist and pathologists in government sector. Brain tumor and clots are common situations and become deadly if not diagnosed in time or treated well. MRI and CT scans are used for

detection of such conditions. Human error is another issue that is effecting efficiency of this system. Keeping in view this problem, this research proposes a system that will be able to gather scanned images form a central system that will be updated by the nodes present at different geographical locations. System automates the process of determining if there is any clot or a tumor present in the brain. It will be capable of computing size and location of the tumor. For this purpose, Machine Learning will be used. Datasets will be developed and to create classifiers. CPU processing capabilities are limited; it cannot handle huge amount of requests from dozens of centers. In this regard, a heterogeneous parallel computing will be performed using NVIDIA GPU. It will help to speed up the process. Web portal will be developed and initially XAMPP will be serve the purpose of host. It will help to test the system at single node. Database will be also being managed for report history and it will provide search option with queries like patient, disease, date, location etc. After evaluation of the prototype it will be shared with INMOL Hospital for commercial testing. If found capable, it will be donated to government institutions.

465. DISTRIBUTED VEHICLE TRACKING SYSTEM

Project Advisor	MR. SYED NISAR BALTI / MR. ADNAN GHAFOOR
Status	Complete

Tracking vehicles in a big city using centralized database system is difficult and causes load on the system, which results in the delay of tracking vehicles. It can make the system too vulnerable, causing security issues. Also, it may take more time and requires an expensive system. To solve this problem, we will use distributed systems approach. In which there are distributed nodes in cities, where the requests are received to track vehicles. When the requests are entertained, each node, having its own server (database), using its database and looks for the vehicle info requested. After the vehicle's info is founded, that specific node signals, which returns the vehicle's info back to the client (requester).

466. SHIP DETECTION

Project Advisor	MR. SAEED IQBAL
Status	Complete

Synthetic aperture radar (SAR) is a critical instrument for oceanographic perceptions, giving itemized data of seas, surface and fake gliding structures. Keeping in view the constant danger, the ships face, because of no surveillance over the sea route to ensure the safety of shipments and providing the security from illegal transportation or any illegal entry of an enemy armed ships. Our results show that CNNs are effective models to perform sea target arrangement in SAR pictures, and the mix of various info goals in the CNN demonstrate enhances its capacity to determine highlights, expanding the general grouping score. Because of advances in SAR innovation and sending of new SAR satellites, an expanding measure of information is accessible, and the improvement in management of shipments. The neural system has enhanced the computers vision in the form of deep learning, to train computers in able to recognize the figures up to 60-70% which are usually impossible for a computer program and can only be done by human mind.

467. MOVEMENT DETECTION

Project Advisor	MR. SAEED IQBAL
Status	Complete

This application detects and notifies about certain human actions (sleeping, running, eating etc.) using real time object detection and deep learning technique.

Joseph et al. proposed that humans glance at an image and instantly know what objects are in the image, where they are, and how they interact. Current detection systems repurpose classifiers to perform detection. YOLO a new approach to object detection. It outperforms other methods such as R-CNN and DPM. The base model processes images 45 frames per second and fast YOLO processes at 155 frames per second.

How the Detection does really happens??

Recent approaches like R-CNN use region proposal methods to first generate potential bounding boxes in an image and then run a classifier on these proposed boxes. On the other hand, YOLO reframe object detection as a single regression problem, straight from image pixels to bounding box coordinates and class probabilities. The system only look once (YOLO) at an image to predict what objects are present and where they are. YOLO makes less than half the number of background errors compared to Fast R-CNN.

The system divides the input image into an $S \times S$ grid. If the center of an object falls into a grid cell, that grid cell is responsible for detecting that object. Moreover it stores a confidence store which depicts the accuracy of the detection.

The model has trained its conventional layers on the ImageNet 1000-class competition dataset [1]. The model is also been evaluated to PASCAL VOC detection dataset [2]. Thus different methods were used to train the model for weeks and then it reached the final layer predictor which predicts both class probabilities and bounding box coordinates.

Just like other detectors and any software YOLO too have limitations. The grids take space and can have only one class so the nearby objects prediction % decreases an example is flock of birds. It struggles on new objects.

468. KYN (KNOW YOUR NEIGHBOR)

Project Advisor	MR. SAEED IQBAL
Status	Complete

KYN (Know Your Neighbor) will be an android based mobile application which will provide a platform for the people to have contact with their neighbor's and other members of the housing society. Neighborhood definition will be through maps. We will create a group/community of each society and verify all the people in the group/community. Users of this application can create event/broadcast message to a selected group from amongst residents of the society and through this application every member gets to know about events happening in the society. This application will increase level of communication among the society members who will have the option of not sharing their mobile number s. Every user in this app will be verified. There will be privacy definition at various levels.

469. BREAST CANCER HISTOPATHOLOGICAL IMAGE CLASSIFICATION

Project Advisor	MR. SAEED IQBAL
Status	Complete

Conventional classification systems rely on proper representation of data and hence focus much of the efforts on feature engineering. This process is time consuming and also requires domain expert.

Nowadays cancer is a huge health issue all around the globe. Around 8.2 million people died of cancer in 2012. Breast cancer is the second most common cancer in woman excluding skin cancer.

Deep learning can extract and organize information from the data without any feature engineering by domain expert. Convolutional Neural Networks (CNNs) is a class of deep, feed-forward artificial neural networks, most commonly applied to analyzing visual imagery. CNNs will be used to classify histopathological imagery of breast cancer provided by BreakHis, dataset available publicly.

The performance of CNNs when compared with other algorithms of machine learning for image classification is much superior.

470. APIFY

Project Advisor	MR. SAEED IQBAL
Status	Complete

Apify will help the user not to perform the same task repeatedly on different platforms. It is a codeless integration platform where a user can make their workflow and can do various tasks at different platform on just one action. It will automatically request authentication across different platforms for communication and sharing data and perform task.

471. IOT BASED IRRIGATION AND FERTILIZATION OF CROPS

Project Advisor	MR. MUHAMMAD RIZWAN ALI/ MR. MUHAMMAD ZOHAIB
Status	Complete

Agriculture holds a great significance in the economy and the G.D.P(Gross-Domestic-Product) of countries around the world. Majority of population directly or indirectly dependent on agriculture sector as it feeds rural and urban population. Traditional farming usually done with in a family or village and expertise farmers pass down their knowledge to their future generations. However this traditional method is no longer available as it waste precious water resource and excess use of fertilizer which might be a disaster to crops. Therefore new methods of farming have been invented like precision agriculture and agriculture4.0. One key idea of new practices in agriculture is the use of advancement in technology to monitor the field parameters and inform farmers to take necessary action during farming.

To address this issue:

- We will deploy nodes in the fields which will sense data.
- Each node sense different parameters like humidity temperature soil moisture and heat intensity.
- This data will be sent to cloud database
- This result the automatic switching of water-pump and opening/closing of valve in the specific region

Mobile app will be used for automatic and manually control and monitor the system e.g. switching on/off water pump and valves.

472. FORMAL MODELING & VALIDATION OF SMART TRAIN SYSTEM

Project Advisor	MR. MUHAMMAD RIZWAN ALI
Status	Complete

Smart transportation system is used to seek help regarding real time traffic situation in area. This is done by giving dynamic message signs to users.

Development and deployment of such systems without formal validation may result in wastage of time and cost. To address this issue, we propose to formally model and validate a smart transport system with coloured petri net.

473. WINTER SOLDIER (ONE MAN ARMY)

Project Advisor	MS. NAMRA SHEIKH
Status	Complete

Winter soldier is a first person shooting game which is implemented on Unity platform. Different characters and assets are designed using Photoshop. That's a multiplayer game, player can connect with each other on server. Server is used in a way that each player can look for online users and can connect with them to play the game.

474. GROOMED IT

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

The project is based on image processing that would show one's look when someone would come in front of lcd/led then his/her whole looks would be detected and then according to look, on lcd/led dresses,glasses,shoes etc related to the one's look would be displayed.

475. ONLINE SUBMISSION CHECKER

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

Online Submission Checker is a Moodle-plugin where certain coding assignments i.e. ITC or PF programs will be checked automatically. A comparison between the output of the submitted program and the solution will be done. The instructor will either provide the required output or a piece of code.

The significance of this system is that checking coding assignments manually requires a lot of time and effort of instructor.

476. EXAM PORTAL UCP

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

This idea contains two steps:

- Automated DateSheet.
- Automated Exam Invigilation.

In UCP we observe that there is not automated system to generate DateSheet. They have to do it manually. But in this project we will enter the courses, Number of Class Rooms/Labs Available. And our system will generate the datesheet. (90-95% Accurate/with no clash). If there is any clash, one can do it manually.

Secondly we have to enter the teacher's name and our system will assign them the room no. for invigilation.

It will cater individual needs of the invigilators and special cases too.

477. MEDI SUPPLY

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

Medi Supply will provide a B2C platform to customers so that they can get home delivery of medicines and medical supplies from wholesales directly. In the case that items are unavailable the system will allow customers to book for future or provide alternate trade name medicines. We will develop a backbone API that will be accessed via android and PHP front end. In order to provide flexibility we will use python and we communication will be via XML protocols.

478. BACK ON YOUR FEET

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

This app will deal with the medical issues present commonly in a person's daily life and would help him set a diet plan and would also give medicinal help. It would also set an exercise routine for the people with ailment as well as would be beneficial for regular and healthy persons.

479. SEEK TUTOR

Project Advisor	MS. SADAF BALOCH
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Status	Complete
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We are going to build an Application that will provide a platform to those who want to teach and also to those who wants to study by hiring a tutor.

480. ADVANCE AUTOMATED LEASING AND INSTALLMENT SYSTEM

Project Advisor	MS. SADAF BALOCH
Status	Complete

The purpose of this project is to automate the leasing and installment system that can be put to use in Pakistan. Currently in almost all business areas related to installment, the processes are done manually which is risky as well as time taking and the investor is unaware of the use of his investment. This system is providing complete security with details to the customer, investor and cashier with their respective needs.

481. LOKTALE

Project Advisor	MS. SADAF BALOCH
Status	Complete

The game that is being made will have a story line of a folk tale that people have been hearing since a long time from their parents, this will be a game based on unity and will be in 2D. The game's story revolves around Heer the princess and Ranja the prince tries to rescue the princess fighting through the enemies their major enemy is Heer's uncle Goblin.

482. AUTONOMOUS LAWN MOWER

Project Advisor	MR. REHAN ABBAS/Mr. IRFAN ANJUM
Status	Complete

Now a days in modernization, science is working hard to ease the human life by automating different services used by human but at least in Pakistan we have been seeing that grass mowing is the job that is done manually which requires a lot of effort of the gardener. So to ease the job of gardener, we decided to automate the process of grass mowing.

The knowledge areas that are to be used are mobile application development, embedded systems, artificial intelligence.

Finally our product would be able to mow grass automatically. The gardener will have to lay down the loop of magnetic field wire as a boundary and then press the start button manually or it can also be assisted using mobile application.

483. CARS BATTLE

Project Advisor	MR. REHAN ABBAS
Status	Complete

Player can enjoy while driving the car. He/she will feel the real world car driving experience and know the basics of car driving (in different situations). If someone wants to learn car driving but he/she did not have any car than this game solve this problem. User can get the experience of real car driving by playing this game.

484. TRY N BUY

Project Advisor	MR. REHAN ABBAS
Status	Complete

An augmented reality based application that allow user see how certain a 3D model of different furniture products will look like in your room before buying it.

485. SHOOTING GAME (YALGAAR)

Project Advisor	MR. REHAN ABBAS
Status	Complete

It is the first-Person shooting game. First of all we have an coins and we have purchase weapons and armors through coins. It's a multiplayer game and its main feature is to enjoy multiplayer feature game at different users at its on ends. When enemy is in our weapon range user can detect it and kill. And our focus is to achieve accuracy through different weapons.

486. SCHOLAR'S CIRCLE

Project Advisor	MR. REHAN ABBAS
Status	Complete

An Android based application which serves as a platform for users to share their research work in specific domain. User can create and manage his own profile where he can interact with other users and share their work within a community.

487. COMBAT SHOOTING

Project Advisor	MS. MARIA ZAFAR
Status	Complete

Our project is a shooting game based on Unity and some other graphics software such as blender. The game will be a first person shooter and will be playable on windows OS.

488. ASSASSINS VS ZOMBIES GAME (ACTION GAME)

Project Advisor	MS. MARIA ZAFAR
Status	Complete

Assassin's Vs Zombies game is an action, stealth top down camera (RPG game) warrior game, to be build using unity3d , blender and Photoshop. In this game the player have to save the king from zombies using different powers, guns and special sword techniques. There will be six or more different level to finish the game and save king form zombies. The zombies will attack using artificial intelligence .There will shop from where user can buy and sell different items like guns etc.

489. GHOST APOCALYPSE/ HUNTER

Project Advisor	MR. M. SHIBLI MANSURI
Status	Complete

It is first person action adventure 3D game its platform will Pc and game will develop on unity. For making of characters and graphic we will use blender, adobe photoshop. First problem will of making design of the game and after that we focus on graphics and animations. Than work on environment of game and after that coding will be our main focus.

490. FEAR THE DEAD

Project Advisor	MR. M. SHIBLI MANSURI
Status	Complete

“Fear the Dead” is a survival horror game in Virtual Reality, We will be developing this game in Unity3D. The use of Virtual Reality is evolving in the gaming world. The technology allows gamers to immerse themselves in the virtual environments. The main focus of the game will be surviving in a world over-run by flesh-eating zombies. The player will basically have two survival tactics: escape and attack. The game will work on Galaxy S6+, Note 4 and above with Gear VR and the controller that comes with it.

491. ACTION ADVENTURE GAME

Project Advisor	MR. M. SHIBLI MANSURI
Status	Complete

An Action/Adventure Game. We will mainly focus on one aspect of an action/ adventure genre which is movement. The movement we'll be tackling the different types of movement of a character model. It comprises of walking, running, sprinting, crawling, taking cover, moving over obstacles and climbing.

492. IMAGE RECONSTRUCTION & AGE PREDICTOR

Project Advisor	DR. MUHAMMAD UMAIR
Status	Complete

Face Reconstruction is a technique in which we can reconstruct the old images which were torn apart, lines, faded away by the passage of time.

We can reconstruct those using different algorithms and then convert it into 3D facial model.

493. TREYE (TREE-EYE)

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

The purpose of this project is to monitor forests and support the cause of afforestation using autonomous copter. The copter will plan its own path to navigate in a given area. It will take off, patrol the forest and land after computing the survey without any human intervention. It will collect images from its survey these images will be processed and deep learning techniques will be applied to these images to count the number of trees in case any change in number of trees as compare to the last patrol the system will notify the changes. It will also localize a particular tree in forest. Once detected, the trees are tagged with a GPS coordinate through our global localizing and positioning framework.

494. FAULTY SOLAR PANEL DETECTION

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

The project aims at detection of faulty Solar Panel using thermal cameras. Since, it is hard to figure out the exact location of faulty Solar Panel in the electricity grid/electric plant, thus, the project endeavors to slash the time and labor work in probing for the faulty Solar Panel. It will make use of C language, C# language, Artificial Intelligence and Image Processing. The resultant product will detect the faults and using image processing techniques will get an appropriate location of the faulty solar panel from the entire grid of solar panels.

495. WALL BUILDER ROBO

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

We will be developing a robot (Construction Robo) which will place a brick properly in a construction site. It will collaboratively done with the masons at work. Our robot contains raspberry pi3, arduino. Our robot arm pick the brick then detect wall and place brick with the help of vision camera (HD camera).

496. MINIATURE COPTER

Project Advisor	MR. AHMED ABD E MUNEEB/ DR. SYED ATIF MEHDI
Status	Complete

This project is focusing on developing a miniature copter. The copter will be an optimized version of the existing copter we see now a days because it is focusing to be light in weight and much smaller in

size than regular copters with the added advantage of live video transmission to your device using a WIFI module. Movements of the drone will be controlled by an android application.

497. INVERSE PENDULUM IN QUADCOPTER

Project Advisor	MR. AHMED ABD E MUNEEB/ DR. SYED ATIF MEHDI
Status	Complete

A Machine Learning alternative to PID controllers Inverted Pendulum on a Quadcopter. A Reinforcement Learning Approach.

498. HOSHYAAR: EMPOWERING CITIZENS AGAINST CORRUPTION IN PUBLICLY FUNDED PROJECTS

Project Advisor	MR. SARFRAZ RAZA
Status	Complete

The purpose of this project is to develop a mobile application system which improves transparency in the implementation of physical infrastructure developmental plans of the Education Ministry of the Government of the Punjab. Registered observers from the local communities will be able to use the app on their mobile phones to submit reports of any abnormalities/irregularities in construction/maintenance projects. The app will implement an escalation mechanism whereby alarms to highlight corruption will be generated to the next higher level of authority, until the local observers report through the system that appropriate remedial measures have been taken and are proving to be effective.

499. DIGITAL SONIC RADAR (DSR)

Project Advisor	MR. AHMED ABD E MUNEEB/ DR. SYED ATIF MEHDI
Status	Complete

If an event (bomb blast, rocket fire) happens which generates sound waves in its surroundings on earth surface, our product can detect the origin of sound generation (source) within seconds using custom build sensors and mathematical analysis. Any incident (air plane takeoff/landing, train movement with high speed) generates sound waves on earth in its surroundings can be detectable using our product DSR (Digital Sound Radar). Our system contains custom build sensors, ARM modules along with data storage mechanism using C/C++ language.

500. VOIP (SIMULATION AND IMPLEMENTATION)

Project Advisor	MR. NABEEL AHSAN
Status	Complete

Modern data networks has in the last few years evolved into networks which are capable of transferring more than just one information flow at the same time. Each flow is transferred with

guaranteed quality of service parameters. We can call these networks as Converged networks. Converged networks integrate data, voice and video communication into one common unified network.

Introduction and Background

1. Analyze the existing situation of the Voip.
2. Cross connection of the Voip with telephone network.
3. Implementation of sip protocol with android interface.

Write document according to the standards of department.

501. TWINRIDE

Project Advisor	MR. NABEEL AHSAN
Status	Complete

The prime objective of “Twin Ride Application” is to create an android mobile application which could help users to divide the expense of their travelling by sharing the ride with someone else who is going on the same route. The user can not only share the ride within the city but also he/she can extend it to other cities. The user will put his destination where he would want to go, and the other user who has a car and also going to that location will contact each other, set up the meeting point, and then travel together.

502. SYNDICATE (STUDY GROUP CHAT APP)

Project Advisor	MR. NABEEL AHSAN
Status	Complete

The idea is to connect students with other students and teachers. It is an iOS based chat application. User can chat with other users and create groups for chatting. Publish-subscribe model will be used to create channels (to which users can subscribe for guidance about certain subjects/topics). Reminders can be set for assignment deadlines. Real time chatting will be implemented using socket programming. User data will be saved in firebase database.

503. HOME AUTOMATION IOT (INTERNET OF THINGS) BASED

Project Advisor	MR. NABEEL AHSAN
Status	Complete

In the area of digitization and automation, the life of human beings is getting simpler as almost everything is automatic, replacing the old manual systems. Nowadays humans have made internet an integral part of their everyday life without which they are helpless. Internet of Things (IOT) provides a platform that allows devices to connect, sensed and controlled remotely across a network infrastructure. In this paper we focus on home automation using smart phone and computer.

504. ORYZA CERTIFIER

Project Advisor	MR. AWAIS M. LODHI
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Status	Complete
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The project will tackle the issues that arise during the quality check of rice and will become handy for the quality checkers of rice. This can be convenient in rice mills and grocery stores as the software that is being in use for this purpose is quite expensive so this project will be a cost effective system for them. This will result in help to differentiate among the visual specifications of rice as each grain has a specific and often somewhat to completely different set of quality traits such as type, quality, age, shape, size, color and other relevant features. We will be using image acquisition system for data collection.

505. SMART OFFICE BOY

Project Advisor	DR. ADNAN N QURESHI
Status	Complete

This project derives its inspiration from Amazons' warehouse robots which automated the system resulting in increased productivity. This project is also inspired by the Boston Dynamics recently created robot called "Spot the dog" which has superior terrain maneuverability. Our end goal will be to create a programmed robot which will find its path to its destination intelligently and autonomously. Named "Intelligent office boy", the robot will be a very helpful tool or an extension of our limbs doing all the trivial tasks required of it. The primary source of input will be camera, whereby our robot will judge its movement accordingly. Our robot's autonomous behavior is achieved both by Computer Vision and Machine Learning Algorithms. The localized camera on our robot will provide information to be processed according to computer vision algorithms. The object avoidance and localization problems are solved through machine learning and motion estimation techniques such as optical flow, Lucas-Kanade algorithm, Land-marking techniques and Kalman filter algorithm etc.

506. DECENTRALIZED PEER-TO-PEER LEDGER FOR ACADEMIC RECORDS

Project Advisor	DR. ADNAN N QURESHI
Status	Complete

Blockchain is an emerging technology, with almost daily announcements on its applicability to everyday life. It is perceived to provide significant opportunities to disrupt traditional products and services due to the distributed, decentralized nature of blockchains, and features such as the permanence of the blockchain record, and the ability to run smart contracts. These features make blockchain technology-based products or services significantly different from previous internet-based commercial developments and of particular interest to the education sector that is founded on timestamp record-keeping of titles of ownership. Within education, activities likely to be disrupted by blockchain technology include the award of qualifications, licensing and accreditation, management of student records.

From a social perspective, blockchain in academics offers significant possibilities beyond those currently available. In particular, moving records to the blockchain can allow for:

- Self-sovereignty
- Trust
- Transparency & Provenance

- Disintermediation
- Collaboration

We find that the ability of blockchain technologies to create data management structures where users have increased ownership and control over their own data could significantly reduce educational organizations data management costs, as well as their exposure to liability resulting from data management issues. It describes case studies of implementations at the Open University UK, the University of Nicosia, MIT and within various educational institutions in Malta: each of these implementations is in a piloting phase. However, even from these early pilots it is pertinent to conclude that blockchain could probably disrupt the market in student information systems and loosen the control current players have over this market. Blockchain technology will accelerate the end of a paper-based system for certificates. Any kinds of certificates issued by educational organizations, in particular qualifications and records of achievement, can be permanently and reliably secured using blockchain technology. More advanced blockchain implementations could also be used to automate the award, recognition and transfer of credits, or even to store and verify a complete record of formal and non-formal achievements throughout lifelong learning.

507. BLIND'S EYE

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

This product is a computer vision system. It aims to aid the blind people to be aware of their surroundings. The system takes visual input from a camera and pre-processes the captured image to remove noise. It then uses machine learning techniques to identify the objects in the image. Extracted information is provided to the user using audio.

508. DOOR UNLOCKING & VIDEO SUMMARIZATION

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

Nowadays, big amount of multimedia data is being processed, sent, received which makes this process slower and its computation cost is very high. The video summarization is the technique of managing videos and is extended to process whole video information in less time. This system will summarize the video into a brief video according to the activities in it. The user may change the summarized video according to its need from the given options.

509. HUMAN DETECTION AND TRACKING IN A VIDEO

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

In environments where a camera is installed on a freely moving platform, e.g. a vehicle or a robot, object detection and tracking becomes much more difficult. In our project, we would be working on real time system for human detection, tracking, and verification in challenging environments.

To see if a specific person has been to a place or not, if yes than at what time or how many times, we need to see the whole video. This requires a lot of time and manpower. With the help of some image processing algorithms, our project will be able to detect and even track a specific person merely by giving that person's image and later on summarize a video having every frame that has that person in it.

510. HUMAN BEHAVIOR PATTERN RECOGNITION AND PREDICTION

Project Advisor	MR. SYED ADNAN-UL-HASSAN / DR. MUHAMMAD AMJAD
Status	Complete

Our project uses AI to recognize pattern in human behavior and appliances and predicts their future uses to save time and electricity and other useful resources.

511. STOCK FORECASTING

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

The main objective of this project is to predict the future trends of a given company stock by comparing its data set (containing different features of stock) with its own and other relevant companies' data set. The major significance of this project will be the close approximation of next stock price of that company. How far in future we will be able to forecast will depend on the data set. It could be an hourly or day prediction of stock prices for next month. By this application a company having the prior knowledge of their stock's behavior can change their marketing policies if required. The following knowledge areas will be used to deploy this system

- Time series analysis model
- Regression model
- Machine learning
- Python
- R language

512. TRACKING SYSTEM OF MEDICINE

Project Advisor	MR. ZAID MUNIR
Status	Complete

This project is about manage tracking system of medicine. Increasing transparency in medicines using block chain. This system will tracks medicine from the manufacturer to the consumer. By placing smart tags (NFC chip) on medicine which will store information about the products that how they get from manufacturer to consumer using block chain technology. Block chain provenance for every single medicine product has a digital history, that allow us to trace and verify the origin of the product .Actors in supply chain are manufacturer, Distributors, wholesaler, Pharmacy, Consumer.

513. V-FIXX

Project Advisor	MR. MUHAMMAD ZOHAIB
Status	Complete

Life is so busy and we want to handle multiple task at a same time.

There are many problems we are facing in our life. We cannot solve every problem by own. It may be an electricity failure or a laptop issue or study problem. So, we need a person who is expert in specific field to help us out from problem. Because all these things are important and a little failure make mess in our routine. Different experts of your problems are available at your doorstep.

514. COTTON DETECTION & IDENTIFICATION

Project Advisor	MR. MUHAMMAD ZOHAIB
Status	Complete

In this project, we are creating an algorithm this will help an agent (Robot) which can detect and identifies and object in an unknown environment with the help of artificially programmed robot to survive in an unknown environment. Using algorithm the agent can detect, identify and classify the environmental objects.

515. DECENTRALIZE FILE SHARING SYSTEM THROUGH IPFS

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

Now a day's our mailing system has some Privacy, dependencies, and size limits issues, because of third party or server interaction. We want to develop a system which is free from server or third party interaction. We are using Interplanetary File System blockchain (IPFs protocol) to avoid sever interaction.

516. RESTAURANT MANAGEMENT SOFTWARE

Project Advisor	MR. KAMRAN SHABBIR
Status	In process of completion

As big data continues to change the world, we try to incorporate it into an industry which can benefit a lot from it i.e. the food industry. As a restaurant manager, some of the biggest questions that you face every day are; what do you serve, and when? Which server covers which shift? How do you price the different items on your menu? How do you promote specials? And, to which demographic? Was last week's business bad because of the rain, or because Ahmed was manning register, and he has difficult time upselling? If you had answers to these and many more questions backed by data then managing your restaurant become easier and more efficient. We intend to make a web-based application that enlist the help of big data techniques to make this a reality. There will also be a separate mobile application for our customers so that we can interact with them directly, gain useful data through those interactions and use it to better market ourselves.

517. ATTENDANCE SYSTEM USING WIFI

Project Advisor	DR. NAUMAN MAZHAR / MR. ALI AYAZ
Status	Complete

Now a day's marking attendance is major issue and keeping record of user working hours is hard to do as well. But without keeping record, we can't judge about user performance and his working, So our system will mark user attendance without any disturbance and will keep his track record too.

518. MARAT SAHRIA (E-SMART MIRROR)

Project Advisor	MR. IRFAN ANJUM
Status	Complete

An artificially intelligent product will be made which will be able to display texted image on LCD screen depending upon user voice command. Camera will be placed at the top of the mirror that recognizes the authorized person of your home with his/her name. The product could be used to control nearby appliances. The controlled function will be performed via Raspberry Pi. The product could be extended to accommodate features of e-wardrobe try room (You just need to drag the costume on your reflection in the mirror and your reflection wear that costume) as future work.

519. TRACKING & SURVEILLANCE: MULTIPLE CAMERAS, MULTIPLE TARGETS

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

When it is required to track the movement of a person either from direct feed of CCTV footage or from saved feed, it is done manually by watching all the feeds from the cameras which is a time taking process. We want to automate this process, in which the investigators will select the person of interest and our system will tell them all the places visited by that person. Security agencies like police can use it in case of theft, blasts or to track any kind of suspicious activity. We will use deep learning, computer vision and image processing techniques to track the movements of a person.

520. FACERAKING

Project Advisor	MR. KASHIF MURTAZA / MR. SARFRAZ RAZA
Status	Complete

The objective of our project is human surveillance using Multiview face recognition + light invariance + pose invariance at multiple sites within an organization.

- 1) Classroom attendance based on student's presence for whole class using camera.
- 2) If admin wants to know that where is any particular person at any instance.

We will install multiple cameras at one site to capture different views of entered people so that the face become frontal in at least one view. With frontal view available, face detection becomes more reliable and less alignment efforts are required.

We'll also use depth cameras (if available) to find the count of people which will increase the accuracy if people will come in groups.

521. VENGEANCE AND HONOR

Project Advisor	MR. M. SHIBLI MANSURI
Status	Complete

'Vengeance and honor' is basically third person shooter multiplayer game. It allows the Players to play with each other, compete with each other and have fun.

522. PHYSICS LAB (PL)

Project Advisor	MR. SARFRAZ RAZA
Status	Complete

The purpose of this project is to develop an Android application which helps students to perform physics experiments in a simulated environment. Physics Lab will be a 3D, virtual lab that provides an interactive way to understand physics experiments. The application will be for science students and teachers. Students will be able to practice three physics experiments at their own convenience, repeating them until they feel comfortable that they fully understand them, without any additional cost in terms of equipment of man-hours of lab personnel. The app will enhance the ability of teachers to deliver a live demonstration of experiments from the curriculum in a controlled environment. We are going to develop three physics practicals.

523. VIRTUAL SCIENCE LAB (VSL)

Project Advisor	MR. SARFRAZ RAZA
Status	Complete

"Virtual Science Lab" (VSL) is a science lab where experiments can be performed virtually in 3D. All instruments and equipment will be provided - though not physically. One can view, observe and practice experiments with them. VSL would be user-friendly and could be downloaded on Android phones. The main focus of this application is to help the students learn how they can perform the experiments.

524. SHOPICK

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

The Shopick is android mobile based application which will help the audience to purchase their favorite product in quick time by scanning an object or uploading a picture of the product which audience want to purchase. If other audience whom want to sell their product they will just upload a

picture of the product also the product details including contact details. When a customer will upload the picture of the product the Shopick will show the results of particular product will price comparison and nearby shops where the product is available else if customer don't want to go for visit then customer just order online and Shopick will forward the order to the owner of the product.

525. JOB MENZA

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

It is difficult for the candidates to find jobs according to their skill set. Candidates also face difficulty in advancing through to the interview phase. Companies have to go through hundreds of resumes in order to select the perfect candidates. Our website will be providing them the benefit of filtering out the candidates according to the recommendations provided by a permanent teacher of that institute moreover student will have to upload their resume as well as update their work fill an online cv form. A feedback mechanism will also be introduced with respect to the companies affiliated.

526. CASHIER LESS SHOPPING MANAGEMENT SYSTEM

Project Advisor	MR. IRFAN ANJUM
Status	Complete

People often face problem of standing in queues while waiting for the cashier to calculate their bills. They also have problems with cashier's behavior. Departmental stores have to pay a large amount of money to the cashiers and other employees who pack the products into bags. We are developing a cashier less automated customer and sales management system for big departmental stores. There will be no cashiers inside the store only the customer will enter into store and shop without hassle of standing in queue for cashier.

527. SMART BURST

Project Advisor	MR. IRFAN ANJUM
Status	Complete

In professional photoshoots multiple images of the same objects or scenes are taken and selecting the best image through our naked eye is hectic task for normal users or sometimes for professionals that it may take a huge amount of time like hours or even days. There should be a system which enables the users to select the best image with quantifiable features considering technical scales which will be a huge time saver and provide much accurate results to the users.

528. TAILOR TECH

Project Advisor	MR. IRFAN ANJUM /MR. M. SHIBLI MANSURI
Status	Complete

The application Tailor Tech will use AR which is built-in module of the smart phone. By using this application user will get all of his physical measurements by moving in 360o in front of camera.

Mobile camera will be used to get all his physical measurements. All of these measurements will be saved in his profile for future use.

529. AUGMENTED APPEARANCE PERFORMING PHYSICAL ACTIVITIES

Project Advisor	MR. IRFAN ANJUM
Status	Complete

Our project is a robot based project. Robot will be controlled at workplace through a mobile device. There are number of people in our society who are handicap (cannot move). Our focus is to provide them a helping hand. Robotic hand will have a wheel base so that it can move in the work place and will help in picking up things.

530. COLLABORATIVE MAPPING USING AWARM ROBOTICS

Project Advisor	MR. MUHAMMAD ZOHAIB
Status	Complete

Mapping in an unknown environment is a critical task in the field of robotics. Nowadays map making using robots is being done by two techniques G-map and Hector map which is not too helpful because of its time management and working of a single robot. Our system will work on multiple robots which will generate their own map and at the end it will merge all the maps and create a one single map. Our goal is to save time and to work on those areas where Google maps does not operate. The knowledge areas to be covered using **ROS, Python, Artificial Intelligence (AI), PCL (point cloud libraries)** and it will be simulation based.

531. AUTONOMOUS ROOM CLEANER ROBOT

Project Advisor	MR. MUHAMMAD ZOHAIB
Status	Complete

We are aimed to design a wheeled mobile robot "Autonomous Room Cleaner" in a Simulator as well as a hardware prototype (as a future task). It will navigate autonomously in a room and create a grid map. It will clean the entire room while localizing itself. It will learn the changes made in the room and update the generated map accordingly. It will clean the target area in minimum time by utilizing the integrated vacuum cleaner. Tools that will be used in the project are:

- Sweep 2D Laser sensor
- GPS or encoders
- Raspberry Pi
- Robot Operating System (ROS)
- V-Rep
- Python/C++
- Wheel encoders

532. OBJECT RECOGNITION WITH ESTIMATED DIMENSION

Project Advisor	MR. MUHAMMAD ZOHAIB
Status	Complete

The main problem is that how to identify the object. Generally cameras are used to check the objects. Now a days researcher are focusing on laser data for object's identifications. The laser presents the environment in the form of data points which requires clustering for further processing. By considering the novel research, in this project, we will present an algorithm that utilizes the 3d laser sensor to identify the objects in V-Rep simulator. We will clusters the environment data and identify using some AI technique (ANN, CNN Bayesian etc.). The technique will be finalized after some research. We hopefully create a data set for identifying the object. We will consider three objects including Jar, cup and glass.

533. #AR (BRINGING INNOVATION TO OLD SCHOOL IDEAS)

Project Advisor	MR. NABEEL AHSAN
Status	Complete

An augmented reality integrated mobile application platform that will display information in multi-dimensional visual models in numerous categories covering individuals and businesses in real time. Execution of the visual representation will be implemented on printed material. Model objects will display information. Application will use image recognition, object tracking and data crawling.

534. SMART MALARIA SCREENING (SMS)

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

Malaria is a life-threatening disease caused by female anopheles' mosquito which injects plasmodium parasite in the blood stream of a human body. In 2017, there were an estimated 219 million cases of malaria in 90 countries. Malaria deaths reached 435 000 in 2017.

With the advancement in computer science the medical field is revolutionizing day by day. Nowadays there is lot of use of computer in medical science for the detection, prevention and cure of different diseases.

We aim to develop a mobile application which takes an image of the blood cell from user and predict the presence or absence of malarial parasite in the said blood sample using techniques of image processing and machine learning.

535. GENERAL DELIVERY AND TRACKING SERVICE APPLICATION

Project Advisor	MS. SADAF BALOCH
Status	Complete

The process of online delivery of something is increasing now a days. People are buying different things online and get delivered at their home. There are many issues in this process like tracking of

delivery man is the main big problem on both ends customer and deliver and a company who is delivering. There are many other problem in delivering like delivery man not know about shortest route towards its multiple destinations and scheduling to deliver something at which time to customer house. Mobile application will help in term to solve this problem where all required feature will be there according to different domains like milk delivery, food delivery and cloth delivery and application will have feature of routing and scheduling with the help of algorithms.

536. SMART TRAVELLING

Project Advisor	MR. AATHER SULEMAN
Status	Complete

Smart Travelling is an android based application which help travelers in finding best rout and suggest them where they can stay when user travels from one place to another. It is very useful application for those who travels frequently and they do not know how many money they needed for their journey. It will show cheapest and most affordable packages.

537. WILD HUNT (3D)

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

This projects focus on entertainment game bases on open world 3D Adventures shooting game. The game is based on character survival and killing wild animals in a jungle environment. Game starts with a character spawn in a jungle. Jungle will be filled with different wild animals. Player will have weapons to kill animals. He will have an animal detector (Gadget) with him. Player has some specific range on his detector in which detector starts beeping whenever any wild animal comes near to the threshold of the player which is manage by his detector the detector starts beeping and when he steps in the specific range of the detector sensors the detector will start beeping faster to notifying the direction and position of wild animals. Player will have one health bar which will be affected by animals attack player has to survive till his health lasts and has to kill animals to increase his score and rank which will help him to get different weapons skins. Player will be able to move freely in a map along with an animal detector and weapons. In the start of the game, the player will have crossbow and a knife. As he kills animals, he'll get point from which he can buy/unlock new weapons i.e. Assault rifle, pistol or a sniper. He will be able to carry two weapons at a time primary and secondary. Player has to kill animals till his health is above zero or he kills all the animals and wins. As the health hits zero, the player will die and the game will end or after all the animals killed in the map will make him win the game.

538. PAK TAILOR SYSTEM

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

The main problem addressed was dealing with online tailors. Pak tailor system is the technique of developing that users handle their details about clothes efficiently and effectively. The system offer a

number of benefits to the user and can capture data, store, view, add, delete and track the recode entered. It also provides information to the customer about the fabrics to be used, quantity in terms of pairs, urgency and provide feedback facility.

539. VISUAL GAME EDITOR FOR UNITY

Project Advisor	MR. HAROON ABDUL WAHEED/ MR. M. SHIBLI MANSURI
Status	Complete

Unity is a cross-platform real-time game engine through which only expert developers can create games using scripts. The Visual Game Editor is a plugin for Unity offering visual tools that will enable novice users (mostly kids) to create simple yet creative games without writing a single line of code. The knowledge areas needing will be game design, game development, introduction to software engineering, programming fundamentals etc. The tool will allow kids to simply drag and drop logic blocks in order to create games.

540. URDU APHASIA SPEECH THERAPY

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

The problem is basically that aphasia is a disease which is quite popular in Pakistan. It is caused by a stroke and it effect's the brain due to which a person is unable to speak, listen or see properly. Old people are mostly victim of it. Now as these patients have a high ratio, not many hospitals in Pakistan are working on such patients, but the doctors who work in these hospitals to deal with these patients cannot cop up for longer. They might not be available sometimes. In this case the patient who is dependent on that doctor is disappointed and wastes the day for his cure. Also highlighting the people from villages who can't afford to be under custody of such doctors and neither they are literate enough to understand English language. To cater all this we are planning to build a hybrid application that will act as a therapist and deal with patients in both English and Urdu and will help them get cured and back to their normal selves. When this app will open it will have 3 modules one will be for seeing one will be for hearing and the last will be for listening. When talking about the seeing module when you will open it there will be many options like alphabets words objects colors etc. there will also be a crossword puzzle game in this module. When coming down to the next module which is the hearing one the user will be provided with sounds of alphabets words objects and a few more things which will make him listen and work on his listening skills. The last module, will be the speech one in which the user will improve his speech by speaking words alphabets objects and also sentences and also stories. Each module will have a test module in it where there will be three levels of test starting from beginner to professional level. The professional level will be based on pure normal human senses. If the user passes this test with a good percentage then the user can consider him cured or almost cured. Each module will have a test of its type but there will be a test module as well in which there will be an overall test of all modules combined. It'll have three stages as well from beginner to pro level. This app will help an aphasia patient to get back to normal. The user can use this app in Urdu and English so the one who can't speak English or don't know about it can learn from the Urdu module like people in villages in Pakistan. We are also planning to add a module which will also deal with translation from Urdu to English and English to Urdu. The user will enter a sentence which will be translated to the respected language to the user can learn translation as well and thus this will help village illiterates to learn both languages as well. But it is optional.

541. SMART SHOPPING TROLLEY

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

We will be making a smart shopping trolley. Our shopping trolley will follow its user through a connection with mobile carried by user. It will be autonomous, obstacle avoider and human follower. Through localization, map direction and promotions will be shown on mobile. Trolley will trigger an alarm/vibration on user mobile application if it will be stuck. If the user is moving out of a specific range then the trolley will also trigger alarm/vibration.

542. INCREMENTAL CLUSTERING AND ASSOCIATIVE LEARNING FOR REAL-TIME DYNAMIC GESTURE RECOGNITION

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

The ability to learn from the environment and memorise the acquired knowledge is essential for robots to become autonomous and versatile artificial companions. This architecture proposes a novel learning and memory architecture for robots, which performs associative learning and recall of multi-modal sensory patterns. The approach avoids the inclusion of task-specific expert knowledge and can deal with any kind of multi-dimensional real-valued data, supporting incremental learning. The proposed architecture integrates two machine learning methods: a topology learning algorithm that performs incremental clustering, and an associative memory model that learns relationship information based on the co-occurrence of inputs. Multi-modal sensory data are incrementally grouped into clusters. The evaluations of both the topology learning algorithm and the associative memory model involved the memorization of high-dimensional visual data as well as the association of symbolic data, presented simultaneously and sequentially. The developed architecture and corresponding findings contribute to the domains of machine learning and intelligent robotics.

543. BLOCKCHAIN BASED CROSS-BORDER REMITTANCE

Project Advisor	MR. ZAID MUNIR
Status	Complete

Cross border remittances are the international transaction made by people across the world on a daily basis. These transactions mostly include migrants sending money to their families in their home countries. Remittances make up a good percentage of a country's capital flow, however, they are slow to process taking up to four days for clearance. If this system is developed on the data structure of block chain, the processing time of these transactions will be drop down to almost instantaneous. According to World Bank by reported, the amount of remittance on a global level increased in 2018 by 10%. The global remittance percentage is expected to grow 3.7% in 2019, so the high processing time must be lowered. One of the major reasons for remittances being slow, is that international remittances are processed through third parties. If the system is based on block chain using hyper ledger composer, we can implement smart contracts that will remove the third parties involvement in remittance. While making these transactions, people have to pay some percentage of the amount to these third party

companies which can vary between 5-20% of the amount being transferred. Since block chain implementation will remove the third party involvement, users will also be saving cost [er transaction.

544. SENSOR NETWORK FOR AGRICULTURE WATER CONTAMINATION DETECTION

Project Advisor	DR. OUMAIR NASEER
Status	Complete

We will construct a sensor network for detection of water contamination in agriculture, network can communicate with the centralized server through a communication. A communication medium (GSM or Wi-Fi). A front end application will be used to interface with the user. A scheduling algorithm will be implemented to receive data from different nodes.

545. DIGITAL STAPU

Project Advisor	MR. ASIM RAZA
Status	Complete

It is a traditional game which has have been played in Pakistan and india the new generation has forgotten the traditional games which being played from very long int this way our heritage would revive in this project a digital game will be developed naming digital stapu using networking, virtual reality and augmented reality.

546. FORMAL MODELLING AND VERIFICATION FOR BALANCED LOAD IN ON-DEMAND COMPUTING

Project Advisor	MR. MUHAMMAD RIZWAN ALI
Status	Complete

On-demand computing allows computing resources to be available to maximum users. On-demand computing based transaction processing system is information processing system which counters the shifting demands by bringing demanding requirements of resources in use. Load balancing is required by the system when the demands of the resources fluctuate which may result in systematic deployment of computational resources. Further, to allot the transactions to the appropriate resources, scheduling is needed. Thus, load balance scheduling in on-demand computing is a challenging task.

547. VR JACKET INTEGRATED WITH MOBILE APPLICATION

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

Currently a lot of applications are developed using Unity for software, and potentially with Arduino programming platforms for the hardware integration with the application. We'll follow the same approach with Unity, and incorporate Arduino API's in android programming. For us, running the application in real-time is extremely important for the user, many applications don't have vibration, compression or heat and this doesn't provide a realistic experience. We plan to equip hardware that

supports vibration feedback, we will get the feedback on the jacket by triggering the actuators installed in the jacket when hit by an object in the application. This provides the real feel to user while using the application. This will help giving a new gaming experience to users in the future. A grid of actuators and Arduinos will be set up and installed in the jacket which would do the mentioned actions.

548. FOOD INGREDIENT AND CALORIES DETECTOR

Project Advisor	MR. KAMRAN SHABBIR/ MR. SAEED IQBAL
Status	Complete

Obesity rate is increasing in adults all over the world and in Pakistan also. Due to overweight (obesity) people can have disease like heart attack, cancer, high blood pressure due to cholesterol, diabetes and people don't know how to control their diet and don't know how much calories they are taking in their meal. Our research is based on how we can have this information that how much calories we are taking in our meal and what are the ingredients and recipe.

549. IMAGE DESCRIPTOR

Project Advisor	MR. KAMRAN SHABBIR/ MR. SAEED IQBAL
Status	Complete

In recent decade the research has been focused on describing images by texts but that is inadequate as they do not give full meaning. To get full communication between machine and human a full sentence description is required. Image description by text has progressed so far that is surpasses humans in some cases but description by sentences is still in progress. Our goal is to give full image description and in doing so, get a better accuracy. The project is related to computer vision and machine learning. Computer vision is focused in learning and processing images or videos. On the other hand, machine learning focuses on studying and practicing various algorithms and models and training our machines on the basis of those algorithms and models.

550. RIDER COUNT ON BIKE

Project Advisor	MR. KAMRAN SHABBIR/ MR. SAEED IQBAL
Status	Complete

In this project, we are working in the field of computer vision and machine learning. Computer vision is used for object recognition from the image and machine learning is used to train and classify detected objects from the image. Problem is that accidents happen due to riding more than two persons on bike as bike is made for only two persons at max. It is also illegal by law. The reason is bike imbalances due to overweight. We are detecting this rule violence by detecting number of riders on bike.

551. SIMULTANEOUS LOCALIZATION AND MAPPING (SLAM) IN DYNAMIC ENVIRONMENT

Project Advisor	MR. SUNEEL KUMAR/ MR. MUHAMMAD ZOHAIB
Status	Complete

Simultaneous Localization and Mapping (SLAM) in dynamic environments is an under considered problem in the field of robotics. It is due to fact that without environmental information, the robot may not complete any task with accuracy. The existing mapping techniques are widely used for static environment such that GMapping or Hector SLAM. However they may fail in case of dynamic objects. Therefore we are aimed to design an algorithm that helps the robot in generating the environmental map in presence of dynamic objects.

552. SMART AND SAFE AUTOMATED HOME

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

This project will help users in real life by providing control of different appliances of home (TV, Air Condition, Lights, Electric Heater, and Camera etc.) Moreover the main gate will be controlled to unlock by face recognition as well as by user from application with simpler interface, child lock will be introduced so that children's cannot unlock the door from inside by themselves, there will be camera outside and inside the house, with the help of these cameras' user will be updated by the records of people in/out of house, with time there will be categories for single person and multiple persons and according to season (winter/summer) and user will also adjust the setting of house by itself using software.

553. YTWC (YOU TELL, WE CARE)

Project Advisor	MS. MARIA ZAFAR
Status	Complete

In our Daily life we come across two things very frequently food and clothes. We waste a handsome amount of time on choosing both. The basic purpose is to save as much time as possible and doing work much better without thinking much. We will be suggesting clothing combinations on daily basis. And food ads will be shown to user according to his location.

554. JELIOT MOBILE APP

Project Advisor	MR. MUSTAFA HASSAN/ MR. ASIM RAZA
Status	Withdrawn

In this app, we will build a tool that will execute the java program with animation and users will be able to communicate with each other using this tool for better learning and understanding.

555. LOOKATMYHAND

Project Advisor	DR. ADNAN N QURESHI/ MR. SAEED IQBAL
Status	Complete

This model will detect human's hand gesture using skeleton tracking and gesture recognition. We will also use the concepts of computer vision and machine learning. Computer vision is basically an

automatic extraction and analysis of an image. Machine Learning is a concept in which a system automatically learn and improve from experience. Skeleton tracking and gesture recognition is used to find out body's position and action of human's hand. We will develop a model which recognize human's hand gesture and perform task accordingly.

556. PYRO-ELECTRIC INFRARED SENSOR BASED SECURITY SYSTEM

Project Advisor	MR. SAJID HUSSAIN
Status	Complete

The project focuses on security in homes, offices and other workplaces. The project will work using image detection to identify authorized persons. It will work in a time limit. For example if there is any intrusion detected and no authenticity is provided within 3 minutes, the alarm will be triggered. If there is no response within the given time, all the entries and exits will be locked using door sensors. Image processing will be used for facial detection. Plus part would be, if someone comes to the place more than 5 times in a week, his\her face would be saved and if the administrator approves, It will be added to the whitelist. For the intrusion part, there will be thermal cameras installed that will detect heat signatures and will identify movement. Laser detection will be installed on walls. If somebody is able to cross the voltage wiring system, the laser detection will trigger alarms. The system will be able to identify vehicles that are registered. If there is any vehicle that is suspicious, the system will trigger the alarm. There will be smoke and Co2 sensors installed to detect any gas leaks in the premises. The system will start to show warnings on a monitor to show the problematic area. Safety measures will be taken if installed. System will be connected to network and will be accessible through mobile application.

557. 3D BATTLESHIP FIGHTING GAME

Project Advisor	MS. SHAISTA SIDDIQUE
Status	Complete

A multiplayer game with the help of server system which will be played by multiple people at the same time using different systems. This is a personnel computer game. It is a naval war game based on the idea of making different war techniques.

558. TRANSPORT XPRESS (F19)

Project Advisor	MR. REHAN ABBAS
Status	Complete

We are going to make an android application similar to the uber and careem. Where the user can book a truck according to his need. The user can also have a bargaining like system which would be carried out using bidding. The bidding similar to free lancer's websites. There is no such app available which includes the bidding system for the user and there is no application available which sums up all the local truck drivers on one platform.

559. AIDVANTAGE AND PRECAUTIONS

Project Advisor	MR. REHAN ABBAS
Status	Complete

It is a first aid app with online/offline features. It will help people who are in emergency and this app will provide precautions to be followed immediately. User will be able to see nearby hospitals and availability of doctors in different hospitals. User can also search diseases by symptoms and app will show the best possible disease after matching the symptoms. This app also has chat bot user can communicate with text messages as well as voice messages but chat bot will be related to its domain.

560. SMART DEVICE PERFORMANCE AND USAGE MONITORING

Project Advisor	MR. REHAN ABBAS
Status	Complete

The gathering of metrics from a device is not uncommon especially with the advent of ELK stack. There are few open source standalone utilities available that can fulfill the role of Logstash or Filebeat to ship metrics from Android devices, but they either work as standalone modules or their integration with Logstash is not that easy. Once the data is gathered, the user is limited to view the data in the only dimensions which Kibana application allows it to. In this project, a solution would be designed to monitor IOT devices (Android based) using ELK stack to provide advanced user reporting using open source tools and technologies such as Drools and other data science algorithms.

561. HOME CONSTRUCTION AND DESIGN USING AR

Project Advisor	MR. REHAN ABBAS
Status	Complete

562. FABRIC FOX

Project Advisor	MR. REHAN ABBAS
Status	Complete

563. PLAYING WITH SOLUTIONS (DEVELOPING FUNDAMENTAL CHEMISTRY LABORATORY SKILLS)

Project Advisor	MR. SARFRAZ RAZA / MR. AMANULLAH JIFFREY
Status	Complete

We are developing an application for handheld devices for the students of Matriculation (Secondary School Certificate).

Our app will enable secondary school students to perform chemistry practicals virtually. All instruments and equipment will be provided - though not physically. One can view, observe and practice experiments with them, student will be able to learn to do these practicals in the comfort of their home without any additional cost. By using the app, the student will gain a better understanding of how the experiments work and the students will develop better fundamental chemistry laboratory skills and they will be able to better perform the experiments in exams.

564. AUTOMATING EVALUATION AND PROMOTION PROCEDURES IN THE PUNJAB HEALTH DEPARTMENT

Project Advisor	MR. SARFRAZ RAZA
Status	Complete

ACR is one of the most important documents used in all government departments for evaluating and promoting the government employees. This system works manually due to which it faces many problems such as corruption, malfunctioning, blackmailing, promotion against merit etc. This project is based on a system which will automate this process. Automating this process will solve major issues such as ease to manage and handle the data of these forms, submission of these forms, evaluation of these forms, saves time and extra effort of the doctors and much more. This system requires knowledge of web and mobile front-end and back-end development languages and frameworks. We will get the data used in this project by the Primary and secondary healthcare department.

565. SERVICEDOER.COM

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

566. CONTROL THE ARM OF OTHERS WITH OUR BRAIN

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

This is a hardware and research based project that aims to provide a system in which if person A moves his arm as a result person B's arm will be moved. If the brain stops sending signals to a body part it cannot function even if blood, food and other vital ingredients are delivered to it. This problem creates disease like body paralysis (arm paralysis), hand tremor and many others. These diseases are still incurable. The focus of this project will be to use the electrical signals generated by brain of controlling person by moving them to raspberry pi after some processing, it will be transferred to the ulnar nerve of controlled person.

This Project can be used with some additions to cure diseases like arm paralysis, hand tremor and many other.

567. FOOD SPOILAGE DETECTOR

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

The food we consume provide nourishment and gives energy to our body, it gives us the ability to do daily activities and help improves our health in direct as well as indirect ways. A healthy and fresh diet is the most important way to keep ourselves fit. The food items kept at room temperature undergo rapid bacterial growth and chemical changes in food. Taking unhealthy food leads to bad health, and can cause different food borne diseases. The purpose to use sensors is to determine the freshness of food. A smart system which can detect the freshness of household food. The identification and selection of pH sensor, Moisture sensor, and Gas sensor to develop a smart food freshness detector ensures the freshness of food and tells whether to eat it or bin it. An android application is developed to select the type of food to be checked.

568. KISAN

Project Advisor	MR. LIAQUAT MAJEEED SHEIKH / MR. AWAIS M. LODHI
Status	Complete

Android is currently the market leader in the today's world and there are many applications for each and every domain. However, there is relatively less advancement of technology in the field of agriculture. This app would be a revolutionary android based agriculture mobile application, which helps the user to take decisions by accessing customized agricultural information related to their needs. Our agricultural app will also provide latest information about tools, methods and fertilizer. This project facilitates dynamic updating and acts as guideline for farmers. We can also provide prices of crops to our farmers. Farmers can detect the disease in plant by the help of mobile camera. The app

provides access to different languages like English & Urdu. This is the intent with which this product has been developed. A strategically planned implementation of this product will have wide-spread benefits across the agricultural field.

569. FORMAL MODELING OF AIRCRAFT MAINTENANCE SYSTEM

Project Advisor	MR. MUHAMMAD RIZWAN ALI / MR. USMAN YOUNAS
Status	Complete

In this research, we aim to propose a formal model based on colored petri nets (CPN) to optimize scheduling. Further, a comprehensive formal analysis of proposed model will be performed to confirm the performance of proposed model. Non Maintenance Factors will be focused and a research paper will get published at the end of the project.

570. RAY OF HOPE FOR DYSLEXIC STUDENT USING E-LEARNING

Project Advisor	MS. MARIA ZAFAR
Status	Complete

Dyslexia is a neurological disorder in which people have difficulties in interpreting letters and comprehending sentences. They face difficulty in differentiating letters that appear to be similar to them. This topic has no sort of identification platform in Pakistan. Our society fails to recognize the importance of education for students with learning disability. We are going to develop a web-based application and mobile based application for the dyslexic students of age group 5 - 10 which would cover three different phases. First, we will diagnose the condition of the subject "URDU" through our research and furthermore provide them with a suitable way in which they are able to read. The existing e-learning systems will be studied and used for the purpose to gather insight about the problems that these students go through whilst everyday learning. After that user-centered-designed interface will be tested by those same participants to tell if they see any betterment in the learning process. This would help us to know that what major role human-computer interaction can play in improving the concentration of the dyslexics if dealt as per their needs.

571. ANDROID CONTROLLER USING BRAIN WAVES

Project Advisor	MS. MARIA ZAFAR / MR. ALI AYYAZ
Status	Complete

Paralyzed and old people which are unable to move their hands and do not have enough strength to hold the mobile devices are not able to use the mobile devices. Mobile devices are a significant part of our lives today. They are not able to access the technology and information which a normal person can easily access. The app can prove very valuable to a disable person. They cannot easily communicate with another person. In emergency they cannot call or send a message to the emergency services like ambulance etc.

572. A FIGHT TO REMEMBER

Project Advisor	MS. MARIA ZAFAR
Status	Complete

The busy life routine nowadays usually results in depression. Playing games is one way among several to relax your mind and enjoy some kind of entertainment. Majority of the people are usually concerned with the history specifically related to the Country. The new generation do not know how our troops sacrificed for us in the history in the previous wars. Our project will help the user to revive the history by playing the game and by accomplishing different missions. The game has three different levels in which the player has to complete the missions by using different techniques and weapons. There will be shop in the game from where the user can buy the weapons. Our opponent in the game will be intelligent, they will sense and perceive their environment, their military powers, in order to decide on an action that will accomplish their given goal. All of this is something that modern AI could actually accomplish, also a bit more to it than just the military decision-making they will have the ability to learn from mistakes in games, a skill which it uses to learn and to avoid themselves from the shoots where they get shooter previous time, means our character will learn from previous mistakes and will save themselves from opponents on AI basis.

573. COMPUTATIONAL FRAMEWORK FOR COGNITIVE EMPATHIC INTERACTION

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

Knowing the users mood can be very helpful in interacting with him or her, and can be helpful for the organization itself the problem arises when the user's mood is not positive, this scenario can lead to low performance by the user. To deal with this problem we are designing a program that will detect users mood through emotion (6 emotions happy, sad, anger, fear, neutral, disgust) recognition in a time span and on detecting negativity in the mood it will play some multimedia for this purpose, as our project is based on research also detecting a mood and timespan for emotions will be done after research, knowledge areas to be used includes Knowledge of OpenCV Some Machine Learning Algorithms and a Solid Grip on Python and its frameworks if frameworks are to be used in the future.

574. MULTI-PURPOSE WALL CLIMBING ROBOT

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

The wall climbing robot is being made in order to reduce the human working and minimize the risk of humans getting hurt as much as possible. Rather a human performs risky tasks on the walls of high rise buildings , this robot will be able to do so with just simple taps from app. As nowadays, there are tall buildings being built and the maintaining those tall buildings's exterior manually by humans is a huge risk. Therefore, to cope up with this problem we came up with this idea.

575. REAL TIME OBJECT FINDER

Project Advisor	MR. SAEED IQBAL
Status	Complete

This idea presents a general trainable framework for object detection. A Wheelchair, Stretcher both are one of the most common supplementary instruments for disabled people or the people with walking difficulty. Sometimes the thing was placed on next room but staff member told to get it from different block or building as they also don't know about the thing placed on next room. We are building an app to overcome this type of problems. App will detect wheelchair and then work on its condition, the user's behavior can be further analyzed and then the system can initiate a notification to the person in need. Our Application will help the people in finding things (Wheelchair or Stretchers) in the hospital. Also this application will have a map that will guide about the direction to reach the required thing (Wheelchair and Stretchers). Application will be developed using artificial intelligence and image processing.

576. HAROOF-E-TAHAJI LETTER RECOGNIZER

Project Advisor	MR. SAEED IQBAL
Status	Complete

Due to technology, machines are having human like intelligence. Despite the fact that they have no intelligence on their own, but due to progress in Artificial Intelligence techniques, machines are quickly catching up. Machines are already proven as superior then the human in brain capabilities, computational speed and memory but still it lacks in processing and interpreting information, recognizing, understanding and making decisions on their own. A lot of progress has been made as far as recognition of Latin, Chinese, English and Japanese scripts. As far as Urdu is concerned the work is

almost non-existent as compared to languages cited above. One of the reasons is extreme complex nature of Urdu writing style. Some work is done for Optical Character Recognition (OCR) which can detect and recognize specific Urdu fonts. So for advance work, we are going to build a platform which will detect and recognize not only the computerized Urdu Haroof but also handwritten documents/images. We will create our own dataset because there is no dataset available for this. We are going to modify the previous work done with working on things which are not done yet.

577. EASY PRESCRIPTION READER

Project Advisor	MR. SAEED IQBAL
Status	Complete

Often times we have prescriptions lying around our home and we want to check the names of these medicines but the writing is completely unreadable by a normal person except a physician or a pharmacy clerk. For this purpose, we have to specifically visit the pharmacy to verify. According to the National Academy of Science's study, they estimate that at least 1.5 million peoples are sickened, injured or killed each year by errors while reading prescription [1]. There should be an application that could allow the user to check the names of these medicines just by scanning the prescription from a camera. A dataset "IAM" [2] will be used to train the neural network to identify what text is written on the prescription. The proposed system would be able to scan the texts of prescription and display them to the user. The user can save the converted texts to his device as a new image.

578. BANNER CURVE-TEXT DETECTION

Project Advisor	MR. SAEED IQBAL
Status	Complete

579. RED NET

Project Advisor	MR. LOVE KUMAR
Status	Complete

Our application provide ease to blood donors, blood receiver and to blood donor societies. In our application receiver can find the blood donors who are nearby or from their friend circle who are already registered in our application. If time remain after completing our application. If time permits,

we'll add a feature for providing conveyance to donors (either some volunteer drop donor to receiver's location or UBER).

Provide ease to societies according to their difficulties and provide digitized environment so that blood donor societies manage their task, data and handle their registered volunteer efficiently and easily.

580. HOW IT HAPPENED

Project Advisor	MR. LOVE KUMAR
Status	Complete

Our youth's interaction with history is diminishing. There is a dire need to represent history in a better way that engages audience. We decided to select an event from our history to represent as an interactive story in VR. We choose to depict The death of founder of Pakistan, Quaid-e-Azam, Muhammad Ali Jinnah, on 11th September, 1948. Our product will be an interactive story relating the events on final day of Quaid-e-Azam's life. We wish to explore the powerful new medium of interactive story-telling and leverage its potential to raise awareness of the rich history of our country.

581. UNIVERSITY RECOMMENDATION SYSTEM

Project Advisor	MR. HAMMAD UL QUDOOS
Status	Complete

582. DIABETIC RATINOPATHY DIAGNOSIS

Project Advisor	MR. HAMMAD UL QUDOOS
Status	Complete

Diabetic retinopathy (DR) is an eye ailment caused due to the severe diabetes and we should detect it early for effective treatment. As diabetes advances, the vision of a patient may begin to fall apart and lead to diabetic retinopathy. Subsequently, two groups were distinguished:

- Non-Proliferative Diabetic Retinopathy (NPDR)
- Proliferative Diabetic Retinopathy (PDR).

In this project a model will be built that detects different levels of diabetic retinopathy (DR) from stage 0 - 4. Various models of machine learning will be used namely Neural Networks (NN), Support Vector Machine (SVM), Logistic Regression, and Linear Regression. Using different models of machine learning and image processing various features will be extracted from the images and fed to the system

for learning and producing accurate results. The aim of this project is to make a model that automatically analyze the disease into its five stages using Computer Vision.

583. COMIC WORLD USING IMAGE PROCESSING

Project Advisor	MR. HAMMAD UL QUDOOS
Status	Complete

Children do not able to visualize things by reading books (text). Their minds cannot grow without pictorial representation because mostly books contain text with hardly one to two pictures. We make comic book by using best images, with suitable subtitles, which are informative, appropriate and entertaining. As we see, different inventions by using machine learning and image processing so we are trying to make digital comic books of different movies by combining both machine learning and image processing.

584. SOCIAL MEDIA CRM

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

The proposed system will be a game changer. With the help of this application, Multiple users using one social media account providing services to multiple clients, will be using our system with multiple accounts and responding to multiple clients through same social media account. This application will be helpful in providing best user experience to our clients and also to the enterprise level management.

585. 3D CHEMISTRY PRACTICAL LABS SIMULATION

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

Our project is a virtual 3D simulation application which will be used to virtually perform chemistry experiments from the practical notebook of 9th and 10th grades. The problem is that many of our schools do not focus properly on practical(s) and, because of that, students cannot learn these skills and allied concepts as they need to. We will develop simulations using Unity3D and Autodesk 3ds Max, with C# as programming language. The final result will be an Android application.

586. LENS SIMULATOR

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

587. COMMUNICATION SYSTEM FOR PEOPLE WITH LOCKED-IN SYNDROME

Project Advisor	DR. OUMAIR NASEER
Status	Complete

588. BIKE LOCATING AND BLOCKING IN INTERNET OF VEHICLES

Project Advisor	DR. OUMAIR NASEER
Status	Complete

There is a need to design such type of system that will give the maximum output we require in a minimum cost. Our project will facilitate people to safe their bikes in a low cost. We will manage it through mobile application and the circuit which we will embed in the bike. Mobile application and the circuit will help us to lock and locate the bike.

589. WAREHOUSE AUTOMATION AND BILL GENERATION USING UHF RFID TAGS (ULTRA HIGH FREQUENCY RFID)

Project Advisor	DR. OUMAIR NASEER
Status	Complete

590. REAL LIFE HEALTH BAR GAME (3D)

Project Advisor	DR. OUMAIR NASEER
Status	Complete

Every Game that we play do not involve the human physical involvement so we will try to make a game that will be more interactive and unique than the others because it will involve user's physical involvement. Our 3D User Interaction Game will involve two players. Health of every player will be visible of the bar lights placed on the shirt wearied by the user. When the health is at dead level, the bar lights will have turned off and alarm attached with our game will produced noise. The data generated in the game will communicate with the shirt using Arduino and will be shown on the bar lights attached the shirt. It will be two player game, one player will be PC and the other one will be the user. It will have multiple levels every level will have more difficulty than the previous one. If the user is killed instantly then the bar light on the shirt will be dead instantly instead of showing health.

591. MATEX

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

592. MEDICAMENTO COMMERCIIUM

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

In today's world, modern medicine can cure almost anything, but it also has its flaws like a slight negligence on the part of the doctor can lead to prescription of drugs that may cause drug-drug interaction (DDIs), an interaction between drugs that can trigger unexpected pharmacological effects, including adverse drug events (ADEs),with causal mechanisms often unknown. This issue is being resolved with the help Artificial Intelligence. We propose an effective model that classifies DDIs from the literature by combining an attention mechanism and machine learning techniques. Then, the system will predict whether the drugs are safe from DDIs or not. Therefore, for this, we devise a model that will train our algorithm to compare drugs and identify any drug interactions. This system will all be in the form of a mobile application, where the user will enter the drugs names into the app. Then the app will provide feedback of whether the drugs will have DDIs or not.

593. GREEN FORCE VR

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

594. NO PARKING AND WRONG WAY TRAFFIC DETECTION

Project Advisor	DR. ADNAN N QURESHI
Status	Complete

Nowadays, development is synonymous with construction of infrastructure. Such road infrastructure needs constant attention in terms of traffic monitoring as even a single disaster will disrupt the way of life. The traffic wardens keep an eye on these things but whenever people get a chance they violate the traffic rules, the main reason is that the traffic wardens cannot keep an eye on such incidents 24/7. So to solve this modern day issue, we are making a system that will keep us updated for such incidents. The system we are making will detect the flow of the traffic on each road, then by using algorithms we will detect vehicles which are going the wrong way. And also scan the no. plates of such vehicles. By doing this we will be able to reduce the daily traffic jams on road and less traffic rules will be violated.

595. CONTEXT BASED MOVIE RECOMMENDATION SYSTEM

Project Advisor	DR. ADNAN N QURESHI / DR. GHULAM MUSTAFA
Status	Complete

We are going to develop a mobile application of movie recommendation system. We are going to research on the previous research done on movie recommender system. We are going to crawl data (Optional, for Pakistani movies) from the available platforms or alternatively, we may use already processed data (on availability) from a previous project and bring a better recommender system based on that research. Then, a final paper would be put forward. This problem is very significant according to the current research topics because currently a large number of researchers are working to convert recommendation systems to context aware recommendation systems, almost every online business company is investing billions of dollars in this field e.g. Amazon has a revenue of almost 4 times the budget of Pakistan and they invest almost 40% of their revenue on recommendation systems. Knowledge areas to be used are machine learning, database, vertical crawling (optional) and mobile application development. The results to be acquired is that we are going to get better context aware recommendations for users from our context based movie recommendation mobile application system.

596. LANDMARK DETECTION

Project Advisor	DR. ADNAN N QURESHI
Status	Complete

The project is inspired by the Google Landmark Recognition challenge. Our goal is to create a software which will detect the landmarks by the already trained neural network. The primary source of input will be camera. Landmark detector will take an image as input and will predict the specific landmark. The methods to be used are Machine Learning Algorithms like CNN and image processing algorithms. This software can predict landmark labels directly from image pixels. The system will not only able to perform automatic annotation of images but also provides the introduction of historical landmarks. This technology also helps in autonomous driving without Global Positioning System in the feature.

597. CLASSROOM RESPONSE SYSTEM

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

In this project we will analyze the response of classroom students regarding the lecture. We will use camera in our project which will help us in recording the video and capturing the images from classroom. The purpose of this project is to analyze the interest of students in their lectures. We will use Machine Learning approach in this project. We will do this project on the student's emotions (Happy, sad, neutral, angry) and postures (Head down, thinking) in the classroom. At the end of lecture after generation of the result from software we will be able to know about the interest or response of students in the classroom during the lecture.

598. GTA CONVERTER FOR BLIND AND MUTE PERSON

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

We propose a smart gesture system that help mute and blind people in conveying their message to regular people using hand gestures. The system process on gestures by using different sensors and translate this gesture to a known phrase or English alphabets. The project was inspired with the idea of controlling hand movements. Accelerometer/Gyroscope sensor is used to measure the tilt in the palm. Five flex sensors are placed on a glove, four for the fingers and one for the thumb. These sensors measure the bend in the fingers and thumb and palm and according to the bend angle value the Arduino microcontroller understands which set of value represent which symbol and transfer the appropriate outcome value to the Android app via Bluetooth which displays and speaks the symbol or phrases.

599. SMART PATIENT MONITORING SYSTEM

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

Many patients died in hospitals due to the carelessness of in-charge personal. Traditional system is not able to provide consistent monitoring facilities. This Smart Patient Monitoring System measures body parameters such as ECG, heart rate, body temperature and blood pressure using embedded sensors system which are connected to Arduino Uno board and processed data will transmit to cloud system and doctor will be notified through different services such as mobile applications/ online website. In order to extend this project, data analysis can be implemented on the collected data. This system will lead to monitor patient's health instantly and continuously.

600. SECURITY SYSTEM FOR PARKING

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

The system developed by us would help the campus security in recognition of car driver's face entering the university campus and license plate recognition. This would be done through database using cameras and facial recognition at the time of entry only the face information and license plate information will be taken and stored in the database and at the time of exit the exiting car would be again recaptured and the new information of car at exit point would be matched with the already stored information. If the face and number of car would be same the car would be allowed to exit.

601. SMART PARKING SYSTEM USING IOT

Project Advisor	MR. AATHER SULEMAN / MR. SUNEEL KUMAR
Status	Complete

To get parked is an important component in a vehicle's life cycle. With the advent of technology and the development of civilization the population of vehicles kept on increasing at a very fast pace. But the parking infrastructure has not kept pace with the rate of increase of vehicles. It has led to congestion of vehicles on roads and vehicles are parked in unauthorized spaces. A research about vehicular traffic has brought to light a startling fact that around 30% of traffic congestion is due to the ignorance of vehicle's driver about a nearby available parking space.

602. DIGITAL WONJO

Project Advisor	MR. ASIM RAZA
Status	Complete

This is a game based project named digital wonjo. Now a days, our community is neglecting and forgetting the culture environment, games and other activities. Our problem statement seeks that whether we can adapt Wonjo for new generations using techniques of 3D game development and networking. Our game will have 2 teams consist of four players in total, which will be moved under rules and logic of the game using Artificial intelligence algorithms and by the user. The human vs human version will have 8 players that will play in a network environment.

603. DEFECT DETECTION ON TILES

Project Advisor	MR. MUHAMMAD ALI
Status	Complete

604. ATTENTIVENESS MONITORING SYSTEM

Project Advisor	MR. MUHAMMAD ALI
Status	Complete

Evaluation of a speaker based on the attentiveness of the audience is a difficult task for human evaluator therefore, our proposed model will detect an individual person through camera on run-time and will implement Body Posture Detection, Head Pose Estimation and Facial Expressions Recognition to finally determine how attentive that particular individual throughout the session was. This model will assist the human evaluator and will be implemented using the concepts of Artificial Intelligence and Machine Learning.

605. HUGU CLOUD SERVICES

Project Advisor	MR. SAJID HUSSAIN
Status	Complete

606. AUTOMATIC CAR PARKING ASSISTANT

Project Advisor	MR. SAJID HUSSAIN
Status	Complete

The proposed system will be a built-in feature which will be embedded in a mock car. The system/feature will assist the Car to Park itself. The purpose of this project is to reduce the costly damage to vehicles while moving in or out of the Parking lot. Now a days we are in a state that we have a lot of well contacted roads, commercial buildings and increasing number of automobiles. We use the manual procedure of parking these automobiles. While parking these automobiles, there is no particular system. Anyone can park anywhere. To solve this problem, we are introducing new car parking assistant which will assist the car to park itself. After reaching the parking lot, the feature can be enabled inside the car that will detect the lanes through image processing and through sensors it will find the obstacles, if path is free, the car will park itself inside the parking lanes.

607. THE UNDEAD

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

Dynamic game difficulty balancing (DGDB), also known as dynamic difficulty adjustment (DDA) or dynamic game balancing (DGB), is the process of automatically changing parameters, scenarios, and behaviors in a [video game](#) in real-time, based on the player's ability. Significance of problem is that difficulty adjustment is needed to keep the gameplay of the game challenging, so it won't be boring as only to follow the instruction from beginning to end. Knowledge areas to be used are machine learning, artificial Neural Networks, game design, game development, fuzzy based logic. At the time of completion of this project, we will have developed an artificially intelligent game in which the difficulty level of the game will be set according to how the player will play. Hence, the behavior of enemies will change according to how the player will play, the result would be increased motivation to keep on playing the game.

608. MOVIECLASSIFIER: MOVIE TRAILER CLASSIFICATION

Project Advisor	MR. IMRAN ARSHAD CH. / MR. MUHAMMAD ALI
Status	Complete

This project is about Action Movie Trailer Classification. Movie Industry is one of the largest industries in the world. Producing a movie takes up billion dollars and yet another millions of dollars are invested to advertise the movie and make it successful in the market. Before a movie is released, a movie trailer is released to advertise and attract the audience to make up their minds whether to watch the movie. One of the major reasons for a movie getting flopped is their trailer because mostly audience watch the trailer carefully and then they decide that they have to watch the movie or not. So, in this way a substantial amount of money is lost to the Movie makers. Building up such a platform which can predict rating of a movie trailer can make movie makers to produce a better movie trailer which in turn can attract the audience to watch the movie. As a result, the percentage of movies getting flopped due to bad trailer would start minimizing and huge amount of money could be saved from getting eroded.

609. GRADE IMPROVEMENT SYSTEM (GIS)

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

The problem is in our society marks and grades really matter a lot to us for our professional life, also for maintaining scholarship packages. Student cannot judge their weakness and strengths so they cannot improve them. Our main purpose is to identify student's weakness so that they will be able to improve their grades. In this project we are working on the improvement of grades. Grades are one of the main reason of causing depression in students nowadays, which lead to many serious problems. We will use Artificial Intelligence and Machine Learning and use some related Intelligent Agents, Algorithms to detect the weakness of students and help them to improve their grades and skills by taking quizzes and recommending notes and videos regarding that topic. It will also help in predicting the required CGPA or GPA.

610. VIRTUAL GYM TRAINER

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

There is a big difference between workout in trainer's supervision and workout using a workout application. The reason is that the trainer tells performer about its flaws and the performer can make corrections accordingly. While using a workout application, there is no one to tell you about your flaws and flaws in technique can lead to injuries. Our application will provide supervision for the users doing work out without trainer.

611. SIMULATION & IMPLEMENTATION OF 6LOWPAN OVER 802.15.4 NETWORKS

Project Advisor	MR. NABEEL AHSAN
Status	Complete

We are interested in the study and the proposal of a solution allowing distributed sensor nodes to communicate with each other in an optimal way adapted to the specific application constraints. More precisely, we want to build a wireless network which consists of several short range sensor nodes exchanging data between them according to a communication protocol at MAC (medium access control) level. We are creating a WSN model which implements 6LowPAN protocol stack using IEEE 802.15.4 standard. This proposal is characterized by modeling and simulation using a network simulator. We will then implement the proposed mechanisms on hardware devices and deploy a sensors network in real situation to verify the accuracy of the model and evaluate the proposal according to different test configurations.

612. AUTONOMOUS SMART CRADLE

Project Advisor	MR. NABEEL AHSAN
Status	Complete

A design of an Automatic Baby Cradle System which gives a reliable and efficient baby monitoring system that can play a significant role in providing better infant care. This system monitor parameters such as baby cry, wetness of mattress, baby presence in cradle. The system consists of sensors for checking baby presence and cry detection along with a mobile application for baby monitoring and notifications, cloud where data is stored and can retrieve to perform future actions. Parents in the present world are busy in their professional life and, so they do not get sufficient time to take care of their babies. If mother is busy in doing some work at home and baby is not with her, and it's difficult for her to put an eye on baby during the work at home. Thus, we need to develop a system to help the parents in taking care of their child while they are busy in doing work or in the night time during sleeping after a hectic day, so without waking, they can provide comfort to their baby. Thus, we come with the idea to build an autonomous smart cradle that detect the baby cry and swing the cradle automatically. And also detect the wetness of the mattress and send notifications on mobile application.

613. AUDIO CONTENT PROVIDER USING VOIP

Project Advisor	MR. NABEEL AHSAN
Status	Complete

The project will aim to assist the visitors by providing them authentic information regarding the attraction which they are visiting in their native language by just taking the picture of the place. In this

project we will try to obtain audio descriptions with a new and improved optimized method. In the first step we will develop a technique that will filter out images from the pool of images in our database based on the location coordinates of the historical places nearby. In the second step we will capture the image of our desired historical place and compare it with already filtered images in the first step. This will not only return the audio profile of historical place but also speed up our searching process. It will also enhance user experience of the application. Our mobile application support 3G/4G network. The process of communication between mobile application and asterisk server is done through Protocols.

614. VIOLENCE DETECTION IN SURVEILLANCE VIDEOS

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

Recognizing fights and aggressive behaviors is an extremely important field in terms of security. Especially in prisons or psychiatric facilities, video surveillance is much needed. Therefore, action recognition has found a way in this specific field. Our system would be able to classify the different activities as violent or non-violent and detect the early signs of violence such as fighting, punching etc. Daily life activities such as eating, driving, running etc. have been studied deeply but aggressive actions have a lot of room to be worked on. Prisons and psychiatric facilities need 24 hours' surveillance in order to ensure public safety. Action recognition is an emerging field in computer vision. We propose a methodology which will detect aggressive behaviors and early signs of violence such as street-fighting which includes punching, kicking etc. This would be done by analyzing consecutive frames of a video and using local features to classify a specific activity as violent or non-violent.

615. SEAMLESS ASSISTANT

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

This project is designed as a helping hand for instructors and teachers to minimize their workload of data entry. The seamless assistant is designed to identify the student's handwriting as well as the teacher's handwriting to get the relevant data from the image of the paper. The image is captured through an external camera that is attached onto a tray. The tray contains the paper to be scanned. Seamless Assistant follows a fixed template to scan for required data. The system will scan handwriting, of any style through image processing and convert it to alphabets and numbers accordingly with the mechanism of machine learning algorithm. The data obtained is gathered and uploaded on the Server, this Web API sever is constructed through flask. The SQL database handles the information stored and retrieved. The seamless system carries various features such as providing template for quizzes for each respective CS course and the instructor will be able to acquire a quiz according to his/her choice i.e. easy, medium and hard. Moreover, the server will display a complete list for students and the marks awarded and will calculate each question's true or false percentage for a

class and notify instructor that the class is weak in the respective part and what topic needs to be revised again. Moreover, in-case of data duplication, students wrongfully or intentionally writing the same roll numbers, the instructor will be notified immediately. At the end, once a paper is checked, the system will take over the responsibility from the instructors. The instructors will no longer have his/her time consumed by unnecessary data entry requirements to upload the results or spend rechecking papers.

616. GPS BASED ROAD CRACK DETECTION USING CONVOLUTIONAL NEURAL NETWORK

Project Advisor	DR. MUHAMMAD UMAIR
Status	Complete

Maintaining good condition of roads is very important to avoid different road safety hazards. Usually the process of detecting and identifying different road damages are done by a manual approach by conducting visual surveys. This approach costs a lot of time and money. Therefore in order to facilitate the maintenance authorities an automated system is proposed in this project that will be able to identify and characterize the road cracks. The proposed system will be an android application that will be used by the general public for reporting the road cracks in their nearby areas. The app will allow the user to take a picture of the road crack. The app will then identify the crack using a trained Convolution Neural Network and the severity will also be calculated. This data with the GPS location of the crack will then be sent to the maintenance authorities. The maintenance authority will be provided with a web interface to interact with the complaints. The authorities will see the complaints on a Graphical Map. The places with the most complaints will also be highlighted on the map for the assistance of the authorities. The data of all the complaints including the images, severity, GPS location and type of road crack will be maintained using a database. False reporting will also be dealt by verifying the complaint from the nearby users.

617. SMART SURVEILLANCE WITH POSE INVARIANT

Project Advisor	DR. MUHAMMAD UMAIR
Status	Complete

The system to be developed will scan and recognize faces of the individuals of an organization using face recognition algorithms. The facial recognition will not only be limited to frontal faces, instead, the system will be capable to recognize the tilted, rotated faces (Pose Invariance). To address this problem, help will be required of the algorithms naming, Data Augmentation, Divide and Conquer, and Rotation Router, Multi Task Convolutional Neural Networks. These methods will allow to successfully detect faces which are looking away from the camera. The application will also keep track of people inside an organization (Kalman Filter, Deep Sort Algorithm) and will also keep an eye out for any intrusion in

specified restricted area. Smart Surveillance will be a desktop application that will smartly monitor the person in an organization. The application will use facial recognition algorithms to provide different features such as tracking individual's presence and their paths, time duration spent in specified areas, and notify the officials of the organization in case of any intrusion in the restricted area. The domain of the application will not only be restricted to identifying the personnel's from the front; Instead, the proposed application will be able to recognize and identify a person from side poses and various angles. The proposed system is challenging to develop as there could be variations in illumination, variability in scale, location and pose. Furthermore, facial expression, decorations and lighting conditions can change the overall appearance, making it harder to recognize faces.

618. VIDEO PLAYER WITH MULTIPLE AUDIO TRACKS PLAYBACK

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

A video player that can play several audio tracks of the same video to multiple connected headsets. The idea here is to provide a solution for the problem when multi-lingual people are watching a video or a movie and several audio tracks are available for the video but only a single audio track could be played for everyone. The project will ensure that different audio tracks for the video are played across different connected headsets. We all like to watch movies. Some people prefer it in English some people in Urdu or some even go for other languages that they are comfortable with. The only thing that is the problem in this when two or more people decide to watch a movie but could not agree on a language for the movie. One person wants to watch a movie in English but the other person wants to watch it in Urdu. The solution we propose can offer language switching capabilities to the individual person watching. Two people can watch the same movie at the same time with different languages played at their headset.

619. MOPIFY (MANIPULATOR OF PROJECTS IN FINAL YEAR)

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

This project tries to develop an online platform which facilitates the final year projects (FYP) process implemented by our information technology programme. The whole FYP is a year-long process involving groups of students and their supervisors to accomplish a theme-based project. It is very necessary to employ the latest technologies in order to allow different parties to contribute and communicate more efficiently. Therefore, we have designed and developed a comprehensive web-based system to better support the three kinds of users; they are the Administrator, Project Supervisors and the project group members.

620. AUTOMATED FIRE EXTINGUISHER DRONE

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

621. VETCARE

Project Advisor	DR. ADNAN GHAFOOR / MR. MOHSIN SAMI
Status	Complete

622. OBSTACLE AVOIDANCE USING STEREO VISION SENSOR IN QUADCOPTER

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

We have an Autonomous Quadcopter which has a limitation that it cannot avoid obstacles. So, we will be developing a system for an Autonomous Quadcopter, that will avoid obstacles. A Stereo Vision Sensor will be integrated in the Quadcopter. This sensor will be used for obstacle avoidance so that our quadcopter can navigate in an environment without any Collision. Stereo Vision Sensor takes two images at same time on a given baseline. Then disparity map is calculated from these images. This disparity map is then used to generate Point Cloud. When we get Point Clouds, they give us information about the data in the image. Then nearest objects are identified using that information given by Point Cloud. Then by applying Obstacle Avoidance Algorithm the Quadcopter will circumvent it through the gap. All the testing will be done in Simulation. Later if time permits it will be ported to real Autonomous Quadcopter.

623. AUCTION IN AGRICULTURE

Project Advisor	DR. SYED ATIF MEHDI / MR. KAMRAN SHABBIR
Status	Complete

We are making an auction app for farmers which is available to all users through android devices. The purpose of making this app to give advantage to the farmers by removing middlemen. As middleman can take profit from both sides and as a result the price of product is much higher than the expected price. By this whole process in which first farmer takes profit of the product then middlemen take commission as a result public suffers because they have to pay the price of that product. So we decided to remove middleman from the process. Farmers may also give assurance of their product to attract the customers. Payment of the product can be done after delivery of the product. It may be done through third-party. Bidding of a product can be shared to social media to attract bidders in a given time of bidding. To make our app more user-friendly we can add feedback or rating features for users.

624. DAIRY MANAGEMENT SYSTEM INVOLVING AUTOMATED ASSISTANCE

Project Advisor	MR. MUSTAFA HASSAN
Status	Complete

We are making a Dairy Management System which will be available to users through android devices. The main purpose of making this app is to provide ease to the local sellers and suppliers in order to grow their businesses and consumers the ease of getting dairy products sitting on couch in their house. First our App check the radius of 1km around user's location and tell them the nearest Dairy shops. There will be rating and distance of all the shops. We will be using both, MANUAL and an AUTOMATED system to take orders from customers and placing orders according to user's requirement and decide whether to accept or reject orders by assessing inventories of the specific shop selected to get the product from. We will be taking care of inventories of every shop. The app will notify the shopkeeper with the order and give him information about the customer and where to deliver. It will also be providing the supplier information to all the shopkeepers and the order of every shop to the supplier through the same automated system discussed above. We will rate every shop on the basis of reviews of customer and every supplier by the reviews of shopkeeper. Delivery boy collects the fair from the buyer in the form of cash.

625. 3D HOUSE MAP BUILDER

Project Advisor	MR. MUSTAFA HASSAN / MR. M. SHIBLI MANSURI
Status	Complete

As the requirement of modern techniques in building construction i.e. civil engineering, everyone need the services of an architecture to design and construct the best and durable building, but the consultation of an architecture is costly for a person constructing a small house. By keeping this problem in view and using the power of computer science we are going to develop an android application that will provide the user with consultancy in constructing their house in form of 3D blue print of the house^[1]. The application will take some requirement from the user and use Artificial Intelligence techniques to generate and provide the 3D blue print of the house with the best utilization of resources according to user's requirement cost-effectively.

626. VIRTUAL FAMILY: LIFE STORIES

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

The development of this game is based on the deep understanding of knowledge about Unity development, through comprehensive investigation and analysis. Virtual Family: Life Stories delivers a use of computer technology to create a life simulated environment that will enhance the game experience of the user. Virtual Family: Life Stories delivers a use of computer technology to create a life simulated environment that will enhance the game experience of the user. Life simulation games are about "maintaining and growing a manageable population of organisms. Unlike traditional games, this game genre includes god games which focus on managing different people, as well as artificial pets that focus on one or several animals. It also includes genetic artificial life games, where players manage different characters at the same time. We can also Control different types of Vehicles like Cars, Bikes, Cycles or Tricycles. With proper Cutscenes and animations the user will play the storylines of different characters and come up with the alternative endings of the characters according to the decision he will make during the gameplay (Tree Base Decisions). Furthermore, there will be a proper dialogue system that will enhance the storyline. Small types of puzzles will also be included in the game in which we will give user the experience of VR.

627. LAW FIRM DIGITIZATION

Project Advisor	MS. FARAH NAAZ / MS. AYESHA ZAHEER
Status	Complete

The purpose of this project is to develop a mobile application which influences modern way to provide a gateway to save clients time and to directly fix meeting with the lawyer to save client from the mess of going to bar council and checking there that if the lawyer is available or not. We are proposing such a platform on which the lawyer and their clients are on same boat. A client who wants to approach a lawyer according to their case can easily get that field's relevant lawyer. We are eliminating the hustle

between client and PA's of the lawyer. We are proposing a communication gateway between the lawyer and the client by providing the chatbot to exchange their issues and fix the meeting.

628. CUSTOMER CARE SERVICE

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

As there is no custom made IT solution for homegrown Pakistani entrepreneur's that reduces the manual work for their restaurant handling remotely on multiple digital platforms. We are going to build a Website and an Android Mobile Application for a restaurant. In Pakistan most of the work in the restaurants is done manually like Order Taking, Team Management, Sales Inventory etc. Customer has to find the restaurant, need to visit the restaurant to check the new deals and forget the food experience in specific restaurants.

629. BANADO

Project Advisor	MS. FARAH NAAZ
Status	Complete

There is not a single platform which provides buy &sell of properties and house building material. Our web portal will help to combine property dealer, seller, buyer, and all those persons who involved in house holding material in a single platform. We will use web development tools, databases, bidding of property &products and algorithms for sorting and ranking. In this project, we aim to develop an online web portal which will deal in property and all type of businesses involved in house building e.g. brick makers, cement sellers, electric and sanitary merchandisers. Property agents will be able to contact with each other directly by sending or receiving notifications of recent properties they want to sell, buy or rent out in any particular area. Individuals will be able to see who is selling material in low cost or giving less expensive and trusted services and from where they need to buy bricks, cement and other material during house building depending upon cost and extra services they provide. We will add bidding feature in our portal, so the users can bid and buy the products and properties according to their budget. We will provide rating and ranking (on the basis of customer feedbacks & rating) of all the merchandisers to help out the users to make their decision from whom they have to buy the products. If the user would not give any requirements, then the portal will sort according to the seller ranking. Or the portal will sort the sellers according to the users requirements like: Low price, good quality and low price as well as good quality. The users can provide their current location using Google Map to the sellers, to receive their products without any inconvenience.

630. MALWARE CLASSIFICATION INTO RESPECTIVE FAMILIES

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD /MR. MOHSIN ABBAS
Status	Complete

Malware is a computer program, which has intentions to harm computers and networks. Recently, malwares are increasing at an increasing rate that it has attracted the researchers to invent new methods of malware detection. However, till date an approach is not suggested which is able to detect zero-day malware. Researchers and antimalware community have developed three main techniques to detect malware: signature based, heuristic based and behavioral based. Signature based detection is the most used technique by the commercial antivirus software, but similar to the other two techniques it is unable to detect a zero-day malware. In recent years Machine Learning has got attention to improve the existing solutions to overcome malware issues. To contribute in malware detection, Microsoft launched a “Malware Prediction Challenge” with a dataset to encourage new methods for malware detection. In this project, we aim to present a solution which is based on Machine Learning algorithms for malware detection. We aim to build a Machine Learning model which will be trained using the dataset provided by Microsoft to predict the existence of malware and its family.

631. LIFE SAVER

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

As a patient in critical condition, may face problem contacting to the hospitals or sometimes failing to inform their family members about their condition, thus in these conditions there is a high threat to the patient's life. Secondly, even if they are able to inform, the first aid fails to arrive in time, thus much time is lost in searching for the hospital or calling for the ambulance. This Application is devised to cater this problem and assist the patient in achieving minimum response time for their treatment. Our application facilitates sudden health changes or any accident effectives to send an alarm signal to all the attendants connected to that person through smart band that will send signal to cloud and the application gets the signal from it. The application will find the nearest and most easily approachable hospitals and send their respective first aid through the best route to save as much time of the patient as possible. A wearable for the patient which will indicate any critical heartrate and notify to the persons connected to the application and in worst possible condition notify the nearest hospital.

632. KUBLOX

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

The goal of our project ‘KuBlox’ is to make an installable debian package for the application ‘Kubernetes’. We intend to provide a functional kubernetes system package that will facilitate setting up master and slave nodes with minimal command line interaction along with catering network protocols and Linux dependency and libraries that are compulsory perquisites of Kubernetes. Virtualization technology is the future, but not everyone has the knowledge to use it. Setting up a Kubernetes system and the clusters is tedious and time consuming task and during this process, even the most experienced developers have difficulties setting up a working Kubernetes system/cluster. It requires running individual command line operations to perform libraries checks and updating required libraries and dependencies to cater Linux system environment.

633. UNICHAIN

Project Advisor	MR. ZAID MUNIR
Status	Complete

In our system, we are basically modelling the database for a university where marks or grades would be added to the blockchain. All data in the blockchain would be digitally signed which would make data tampering by the database administrator impossible and would give provenance and traceability of the data. The multisig wallets in our system will provide final grades approval. There would be smart contracts coded on the Ethereum platform using the language called Solidity. The contracts would ensure that every transaction is digitally signed, only then it will allow to add the transaction on the blockchain. The significance of this problem is that our current universities portal would be secured by data tampering problem of the database administrator and would provide the trace of data that who changed the data and when, that is actually currently needed. The knowledge areas of our project are Modeling, Software Engineering, Mobile application and Web application. The results of this system would be that we would have a university portal as a mobile application and a web application where data tampering by the database administrator would be impossible, we would have our data’s provenance and traceability and it would provide final grades approval.

634. RUN ADAM RUN

Project Advisor	MS. SADAF BALOCH
Status	Complete

Kids nowadays spend around 12 hours a week on gaming. Lack of physical activities is making many kids couch potatoes and introducing them to the world of obesity. We would be using Game-Based Learning techniques to help children learn about healthy food and healthy lifestyle. In an attempt to take a new route, we combined our knowledge of Computer Science and basic knowledge of the brain added with external help. Since computer science is essential in all fields of science, combining these two could produce remarkable improvements to both these fields. Game-Based Learning techniques: The game creates a virtual environment that **recreates realistic situations** (simulations). This way, users (students) learn to function in a safe context, but with rules, interactivity and feedback. **The student accepts rules** more easily in a playful environment: following certain rules, students can advance and succeed in the game. If they don't play by those rules, however, they won't beat the levels.

635. THE OUTCAST KNIGHT

Project Advisor	MS. SADAF BALOCH
Status	Complete

636. AGRICORNER

Project Advisor	MS. SADAF BALOCH
Status	Complete

Waste material of the crops is either used as a fertilizer or is burnt which is a major environmental hazard, this application will connect vendor and farmer and the waste will be bought by the Vendor and will later be converted into biomass. This facility for the farmers to sell or make use of their waste product is not available yet. This application is providing a portal to help farmers to sell their by-product. Also, farmers do not have technical training and guidance about latest techniques of farming. Our application will technically train and guide the farmers through newsfeed feature. It provides farmers with latest agricultural information and modern technologies. It provides with productive agriculture content and information at every stage of the crop growth. The interface of the application will be user friendly and the language will be Urdu. The feature of weather forecast will be provided in the application and weather forecast will be based on user location. Due to this weather forecast feature farmers can plan time of sowing, harvesting, and other field activities. Avoidance of negative weather effects and yield losses by prompt action. Latest agriculture news on daily basis. Equip farmers with latest agricultural information. Significance: agricultural industry did not have any digital source to maintain the relation between farmer and the vendor for the selling of by-product. Although, business was taking place in a physical manner. This application will equip farmers with latest agricultural information. Farmer will be able to sell the Waste product on desired prices, also this can help farmers

to achieve certain level of business. Waste product of crops is converted into biomass. Agricultural crops and waste materials is burned as a fuel or converted to liquid biofuels. We should have knowledge about agriculture, lands. Languages, database, buying selling mechanism. In this project we will follow agile software engineering method and spiral model.

637. BRAIN TUMOR DETECTION (MACHINE LEARNING)

Project Advisor	MR. SHAFIQ UR RAHMAN / MR. MOHSIN SAMI
Status	Complete

Brain tumor is one of the most common diseases all over the world, not only in old people but also in children and young ones. Basically, it is the formation of abnormal cells which can either spread in the whole body and can cause death even. In this project, we are going to design an automated system which will detect brain tumor using MRI (Magnetic Resonance Image). We will use the latest techniques of Image processing and Machine learning to make this automated program. After this project, our automated system will be able to detect brain tumor in the given MRI image and its location.

638. HOSPITABLE ANDROID

Project Advisor	MR. SHAFIQ UR RAHMAN / MR. MOHSIN SAMI
Status	Complete

We are working on an advanced technology that are android based. In this project, we are going to developed an application that if a user can forget his/her mobile anywhere then user can send and receive messages, copy contacts, view all gallery photos, ring the mobile, capture picture with the help of front and back camera, audio and video recording, erase the data and the most interesting feature in this application is that user can track the location of phone with the help of web portal. **Hospitable Android** is based on Android application and website. Cell phones has become one of the important and valuable things of human being. These have become a necessity along with a luxurious need. We are making an application in android and also web portal which are helpful for android mobile user because if we forget mobile at home or anywhere we can easy access all the features of the mobile like send / receive SMS, check SMS logs, check call logs, open and copy the contacts, view all the photos, ring the mobile, capture front and back camera picture, audio and video recording, erase the data and also trace the location of the phone with the help of web portal. This system fully secured in term of database. Mobile and web applications using a shared database on computer and online server. If application database is crashed on computer or online server due to virus then backup databse must be present and database can be updated through it. This system is fully secured and all control will handle through registered user only for related account.

639. INTERACTIVE LEARNING FOR ROAD SAFETY

Project Advisor	MS. RUBAB JAVAID
Status	Complete

People die every day in road accidents. The world health organization said that over 1.2 million people died in road accidents every year worldwide by disregard of traffic rules. They said that we can reduce the rate of these accidents by knowing road signs and traffic laws. In Pakistan approximately 15000 people die and injured annually by road accidents. By knowing the rules of the road, practicing good driving skills and generally taking care as a road user, you help play a vital role in preventing a crash. Our project will help the users to learn driving and traffic rules in an interactive gameplay and they will remember them for a long time. The game has different types of levels in which the user has to go from one location to another. While going on any of the place they have to follow all the traffic rules and signs on every stage to complete the level, as the levels of our game based on different types of destinations.

640. WATCH-OUT

Project Advisor	MR. WASEEM ASLAM / MR. REHAN ABBAS
Status	Complete

Watch-out is an application for communal safety. Nowadays in case of emergency a person panics and he doesn't know what to do. This mobile application does the work for that person. This app will let the users know about the danger in their surroundings anteriorly so that they don't get in problem. It will give verified alerts to the users that are posted by other people near that area. If you post an alert about a danger it will show you the related departments' location on map and their contact numbers. For example in case of fire in a building it will show location and contacts of fire brigade nearest to your location.

641. TALASH-E-MIRAS

Project Advisor	MR. SARFRAZ RAZA / MR. AMANULLAH JIFFREY
Status	Complete

What is culture? This question has led us to propose this exploration in interactive VR story-telling. People nowadays have very little knowledge and awareness of our culture. Therefore, they are not able to pass on their knowledge to their future generations. It gets worse by the situation in formal education, where the subject of Pakistan Studies is being taught in an ahistorical, de-contextualized manner.

We are determined to create an engaging story-based gameplay related to the Culture & Geography of Punjab, Pakistan. The gameplay is based on a train journey that starts from one station of the Punjab and ends at another.

642. SEEING IN THE DARK

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

This is a research based project that aims to convert extreme low light images to properly exposed images without using traditional set back functions, like histogram stretching, equalization, power, log etc. These functions just brighten the image or create great amount of noise in image. This research is to develop a pipeline to convert extreme low light images to such images that have optimal noise and optimal smoothness. This project will also be extended in the research of how to work on generic resolution pictures, how to make it memory optimized, and we'll extend our research on how to apply this on video data. In this project we also aim to make a mobile application that can show working of this project efficiently.

643. XOOM

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

This research based project aims to convert low resolution zoomed images to highly computational zoom without using traditional set back functions, Like morphology, erosion, dilation. This research is to convert extreme low resolution images to such images that have optimal noise and optimal smoothness. This project will also be extended in the research of how to work on generic resolution pictures, how to make it memory optimized. In this project we also aim to make a mobile application that can show working of this project efficiently.

644. DATA MINING IN CRICKET

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

645. NERVES SEGMENTATION

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

646. NEURO-INSPIRED MULTIMODEL ARCHITECTURE USING NATURAL LANGUAGE FEEDBACK FOR ROBOTS

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

The aim of the developed approach is to provide a neural model for processing Commands directed to a robot and create semantic representations that can be interpreted by that robot to perform the action contained in a given command. The machine is able to learn predicates from sentence structures consisting of closed class word (like the, and,...) and place –holder open class words. As input our model receives tagged and labeled chunks (TLCs). The TLCs are fed as a sequence to a network. At each time-step, only two neurons are active, one specifying the current tag, the other one setting the current label. For training, the reservoir state at the end of the sequence collected for each input sequence and a linear Regression is used to calculate the weight for the readout. The output nodes are used to generate RCL trees. Each word can have multiple outputs active. The possible outputs are spatial-relation, sequence, destination, entity, measure, event, type-reference.

647. TEXT2IMAGESCENE GENERATION

Project Advisor	MR. LOVE KUMAR / MR. SAEED IQBAL
Status	Complete

Sometimes properly visualizing a scene from written text can be a difficult task for some people. They are unable to understand a scenario from text and end up making load of mistakes. Moreover, it's difficult sometimes to figure out that how the scene will look like according to the text like when a director of a movie is shooting a scene, Text2ImageScene Generation can help the director understanding the scene clearer. It can also help people who cannot read English visualizing a scene without reading the English text.

648. OTELLO

Project Advisor	MR. SAAD AZHAR SAEED
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Status	Complete
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Recommendation system has become an important research issue with the increase in online services. Many companies like Amazon, Netflix, Linkedin use recommendation system to help their users discover items they might be interested in. The problem with the traditional recommendation system is that they do not consider different users preferences rather than they provide a generalized recommendations. There has been tremendous growth in the amount of data recently thus we need to improve the current recommendation systems to make them more scalable in Big Data environment. Cloud computing software's help us solve the scalability problem. There are many cloud computing software's which provide an effective platform for parallel computing such as Spark. In this project, we will implement KASR (Keyword aware service recommendation method) on Apache Spark. We can differentiate between positive and negative aspects of hotel by reviews given by user through opinion mining in this way we can rate the services provided by hotel individually by using those reviews. This can be further utilize in providing personalized recommendation.

649. FISHBOWL

Project Advisor	MR. HAROON ABDUL WAHEED / MR. ALI AYYAZ
Status	Complete

Fishbowl is able to provide services such as buying and delivering Fish products in application such as Aquarium installation/Repair Variety of Fishes Feed for fish Filters for Aquarium Gravel Wallpapers Aquarium Pump Rocks Lights for Aquarium ornaments Sea shells. If you ever visit a place that has an Aquarium filled with fish. The user will take a picture through our application and upload it to our server and our application will detect that image and tell our user the name of that fish and the user can post a request to order that fish through our application. All you have to do is to download our application and our Geo tagging services will give you a wide range of Fish shops to choose from. Additional features included in the application are Ichthyologist (Fish Expert) opinion and feedback system for shops.

650. REWARD-ME (A LOCATION BASED RECOMMENDATION SYSTEM)

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

651. MEANINGFUL SUGGESTIONS TO IMPROVE THE QUALITY OF WRITING

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

In an essay writing it is important not to miss the crux of the essay. It is very important in the case when the essay is to be evaluated. So for this reason our software would be able to find the missing important points of an essay and provide them in the form of meaningful suggestions. Essay writing is being done from ages. Nobody knows what a perfect essay is but with time certain improvements have been made. But still in the era of online learning there is no way to evaluate the essay on the basis of a proper knowledge. In this project we have proposed the methodology that will evaluate the correctness and completeness of an essay keeping in view the information present about the topic of the essay. At the end a software shall be provided on which there will be a user interface in given input box. The user will write or paste the essay and in the other input box the user will provide the topic of the essay. Upon enter the software will detect the essay using the fed algorithms and will provide meaningful suggestions for that essay.

652. VISUALIZATION OF CONCEPTS USED IN ESSAYS

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

The concepts extracted from the essays shall be visualized in a way that the relationship between them would be visible. This would enable the students and learners to see the connections between the concepts that have been used by them. Students will be able to improve the quality of their writings. The end goal is to enhance the writing capabilities of the learners. The basic idea of the project is to find the relation between the keywords in a writing and visualize them. We will find nouns and verbs in essays and find the relation between them. After finding the relation we will visualize the keywords and their relation. We will use concept mapping for visualization. A concept map is a diagram that depicts suggested relationships between concepts. Instructional designers, technical writers, and others use this graphical tool to organize and structure knowledge. A concept map is a visual organization and representation of knowledge. Relationship and ideas are among them shown through concepts. Keywords are used to create concept map, concept map uses shapes such as triangle, circles, boxes, etc. Then arrows are used between the ideas that are related. Then a short description by the arrow to describe the relation of the concepts. It would be a web application which would have an interface at the front end and a server would be running on it which would be connected to a server at the back end. A text will enter as input at the front end, and will be processed from the back end then user will get the concept map in the form of visualization at the front end.

653. URDU BOLI

Project Advisor	MR. ASIM RAZA
Status	Complete

The proposed idea intends to improve the learning level of Urdu language in kids. It is designed as a game and targets children and teaches Urdu language through several challenges. The result of completing this game will be a child with a new vocabulary of approximately 500 words. The application being developed is a game to facilitate the learning of Urdu. It is different from a teaching software in many different ways and takes an indirect approach towards the teaching of language. The game would follow a storyline and integrate language into it. There would be levels with rising difficulty and would contain a number of things such as alphabets, counting, words with two syllables, words with more than two syllables etc. The lack of attention on the Urdu language has resulted in a void that has left a large number of people especially those who are still young without a sufficient command over the language. This demands some radical steps for the survival and revival of the language.

654. ARANG BAARANG

Project Advisor	MR. ASIM RAZA
Status	Complete

As our goal is to develop a single-player 3D game. In this game we also construct our own 3D animated environment (map), which is of Lahore zoo. As in Pakistan the interest of people towards our culture is decreasing day by day, so by making this game we are trying to make our culture alive like playing tyre and stick game is very popular game in our culture, and now in modern era video games are playing an important role and have taken the place of these games. By making a game on local or cultural place and a game like tyre and stick etc. which is never be seen before we can retain our culture activities.

655. DRESS CODE VIOLATION DETECTION SYSTEM

Project Advisor	MR. MUHAMMAD ALI
Status	Complete

Detecting dress code violations manually can be a hefty task in a university. Our system will automatically detect dress code violations at run time through a camera, installed anywhere at the

facility. We will use the concepts of Machine Learning and Artificial Intelligence to detect dress code violations which assist a human evaluator/administrator. Abiding by the rules and regulations of a university is compulsory for all students. Dress code is a very important part of any institute but it is a very hefty task to detect and penalize dress code violators in a crowded university. This would require a lot of work-force if done manually, so we propose to build a system that will automatically detect dress code violations.

656. ACCIDENT DETECTOR AND SIGNAL GENERATOR SYSTEM

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

Accidents cause major traffic jams and the drivers unaware of the incident location, resulting up more accidents due to less response time. To stop more accidents that happens due to one accident, we are making a system that will be trained to detect accidents before collision through offline videos of CCTV cameras and will generate a signal of awareness to nearby vehicles within a specific range of 3 to 4km which will allow them whether to avoid the incident location or lower their speed to reduce the risk of further accidents. We will cover only cross roads accidents. Our system detects accidents and emits signal to vehicles coming towards incident location which help them to stop, lower their speed or change their path before further collision. We will use machine learning along with computer vision for our research base project. Approximately 1.35 million people die each year as a result of **road traffic crashes**. To save people life's it is important to detect an accident before occurrence.

657. ROBO SOOTOUTS

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

Soccer game is played on a rectangular field with a goal post at each end. The concept of this game is to promote robotics in every field. A soccer robot is a kind of machine, used to play soccer. The robot soccer games have shown to be not only a true source of entertainment but a great source of advances in robotics research. Soccer is the world's most famous sport. Soccer game is played on a rectangular field with a goal post at each end. The main concept of this game is to promote robotics in every field. A soccer robot is a kind of machine, used to play soccer. There are many tournaments conducted every year which includes FIRA[1], Robocup[2]. At present, the RoboCup contest has various soccer leagues like Simulation, Small Size, Middle Size, Four Legged and Humanoid. A robot playing a soccer is high competition for industries, universities and research institutes. There are many tournaments are conducted every year the biggest tournament was the German Open RoboCup. In a soccer playing robot matches, many leagues will be placing the latest technologies on the display. For a robot, playing of soccer is a highly complex attempt. The Robot must be able to constantly identify the ball. There is

a high-tech equipment is arranged to scan the robot's surroundings. Internal processors of the robot can change the data to define game policies and strategies of defense.

658. CURRENCY EXCHANGE (FOREX) RATES PREDICTION USING MACHINE LEARNING THROUGH TECHNICAL ANALYSIS

Project Advisor	DR. SHAHZAD MAJEED TIWANA
Status	Complete

Trading in foreign exchange is riddled with volatility and unpredictability which can make it hard to make intelligent trading decisions. The research to date in this domain is of very less accuracy for making trading decisions. There is room for further improvement. There are previous researches that have suggested several models for this purpose. Specifically:

- 1) Simple Feed Forward Artificial Neural Networks
- 2) Long-Short Term Memory Networks
- 3) Convolutional Neural Network
- 4) Several other Variants of Deep Neural Networks

The research will include comparing multiple machine learning models' abilities to predict currency pair exchange rates (FOREX prediction) using technical analysis approach. It will help investors/traders in making smart trading decisions.

Python machine learning libraries, specifically Keras and Tensorflow will be used to create several models which will be tested on a dataset of (EUR/USD) currency exchange rates over a time period. Tensorboard or Matplotlib will be used to visualize the performance of each of the models on the validation and testing data, and final conclusions will be drawn from it as well.

659. BUSINESS ADVANCEMENT

Project Advisor	DR. SHAHZAD MAJEED TIWANA
Status	Complete

Customers waste there a lot of time in finding the cheapest fare. We will provide them a system that will help them to find the cheapest fare on their single click and will predict them by analyzing the previous data of that particular route by using neural networks. Our system will help the user by giving them cheapest rate at user's desire date and time and will suggest the best date and time to travel on that route at cheapest rate. System will analyze the previous data of that route and train our system by neural networks. It will use the web crawler to search the latest updates of that route which will retrain our system periodically.

660. UNINTENDED TOXICITY CLASSIFICATION

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD / MR. SAAD AZHAR
Status	Complete

Toxicity in comments refers to the use of unethical words in comments. In online conversations, people get aggressive due to different reasons like hatred, anger, the difference of opinion/s, and etc. Due to any of the previously given reasons, people may abuse each other and/or pass negative comments which make the people leave the conversation. Whenever these kinds of behaviors are reported, a human moderator needs to check manually whether the report is correct or not. A human moderator check is not feasible, so this problem should be solved by an automated solution. Previously researchers have also worked on automated solutions but due to some problems, this remains unsolved and is posted on Kaggle as an open challenge. The challenge addresses the problem of unintended bias prediction of toxicity in comments due to the imbalances in the dataset, which needs to be reduced to improve results of prediction. A possible solution to the given challenge may be to use machine learning algorithms to detect toxicity in comments. The initial dataset is provided by Kaggle which we will use in our project. We will use this dataset to train and test our model, and when this phase gets completed new comments are given to the model for prediction. For new comments, an unsupervised approach based on balancing the training dataset will help us in reducing the unintended bias prediction of toxicity in comments. Our findings suggest that due to the use of slang words and language being evolved, it makes the problem a challenge. We conclude that we cannot give an accurate solution but a solution that can reduce unintended bias in the prediction of toxicity in comments to a reasonable extent.

661. OBJECT LOCALIZATION

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD / MR. SAEED IQBAL
Status	Complete

The research of the project is about object localization. Some of the groups like CornerNet proposed solutions about detecting objects as paired keys, BasNet doing Boundary-Aware salient object detection and ExtremeNet giving object detection by grouping extreme and center points. Our proposed solution will be based on the shoulder of some existing solutions. The completing criteria have been given and the challenges are mostly of understanding as the research is still ongoing by the help of machine learning and image classification techniques.

662. ANDROID MALWARE DETECTION USING DEEP LEARNING

Project Advisor	MR. RAJA M. KHURRAM SHAHZAD / MR. MOHSIN SAMI
Status	Complete

As malware for android-based devices can perform a variety of different harmful functions, it is very important to detect their presence. Previous research work has shown significant results on the malware detection on the available data sets. Our aim is to collect a data set and use it for the detection of malicious Android Applications. We aim to perform data set analysis, and feature engineering on the data set. Moreover, we also aim to generate Deep learning models and evaluate the generated model. Android malware can perform a variety of different harmful functions using different infection vectors; thus, it is essential to detect their presence within the Android application (app). Previous research work has shown promising results for the Android malware detection on the available data sets, which are unfortunately old and does not contain the latest examples. For this project, we aim to collect a data set and use it for the detection of malicious Android Applications. We also aim to perform data set analysis, and follow the machine-learning process on the data set. Moreover, we also aim to generate Deep learning models and evaluate the generated model.

663. VR HOME MAP

Project Advisor	MR. ALI AYYAZ/ MR. KAMRAN SHABBIR
Status	Complete

People face problem while making homes. Architecture gave designs in 1-D/2-D/3-D on one page or in picture form. With this when owner start construction he/she face problems for example, he/she do not like the location of windows, doors and dimensions of rooms. We will make an application and then with the help of VR gear user will see his/her home before construction and can make changes before construction in virtual reality. First, of all image of architecture map will read by image processing and may apply color scheme on walls for easiness of user and us too. After this user will wear VR gear and user will see virtual reality model of his/her home. User will see design model of his home before construction in virtual reality and can move in it through sensor to check.

664. UCP VIRTUAL PROSPECTUS

Project Advisor	MR. KAMRAN SHABBIR / MR. ALI AYYAZ
Status	Complete

An immersive 3D virtual reality experience where you can visit UCP having a tour in the comfort at your home and obtaining the required information from the Prospectus through this simulation. People who are far from UCP, or in another City or out of country, can use this application using VR. Using

the latest 3D and graphical tools, like Unity and 3D Maya will provide an environment where the person is able to explore. After using this simulation, user will be able to acquire proper information about UCP and its different areas like faculty, classrooms, an auditorium, library and the food street.

665. PROTECT FINE ART PRODUCED BY TALENTED ARTISTS

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

666. INTELLIGENT ADVERTISEMENT SEQUENCE SYSTEM (S20)

Project Advisor	DR. AMJAD IQBAL
Status	Complete

Digital advertisement is the major part of our society and targeting the interested audience is what all brands demand. Brands always target the audience to which they can sell their products, in which they are interested or looks attracted to them. Our project idea is to installation surface-mounted device (SMD) screen in a mall. This will be used to show digital ad's to their targeted audience. This system will greatly enhance the chance of an ad being viewed by the appropriate audience by showing gender-specific ads. Digital Marketing is an important part of our general public and focusing on the intrigued crowd is the thing that all brands demand. Our undertaking thought is to introduce a surface-mounted device (SMD) screen in a shopping center. This will be utilized to demonstrate computerized AD's to their focus on the people. This system will significantly improve the opportunity of an advertisement being seen by a suitable crowd by indicating gender-based promotions. We aim to help advertisement agencies and brands to increase their viewership to the objective audience. Our system will use the video feed to distinguish gender. In this project, 2 cameras will be used to detect gender. The system will calculate the ratio of both genders. This information will help the system to decide which ad would be played next on the smd. This system will greatly enhance the chance of an ad being viewed by the appropriate audience by showing gender-specific ads.

667. CNC ROUTER MACHINE DEVELOPMENT

Project Advisor	DR. MUSHARRAF AHMED HANIF / MR. KAMRAN
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Status	Complete
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CNC (Computer Numerical Control) machine is an embedded system that is used to make a custom design part. A computer aided design is passed to the controller as some mathematical code consisting of mainly the coordinates and the G-codes specifying what functionality to perform at different angles and this code is onwards converted to some signals that are passed to the motors of the machine. A CNC router is an automated router whose tool paths can be controlled via Computer Numerical Control. It is a technology which aims to generate, parse and execute sequential actions that describe the behavior of the end effectors. CNC machines are widely used in almost all manufacturing systems due to its flexibility in the programming and faster machining process with high accuracy and reliability. The main component of factory automation is that it provides a set of functionalities for the managements of the machine tools.

668. DIRECT TO GARMENT PRINTER

Project Advisor	DR. OUMAIR NASEER
Status	Complete

We are aimed to design a Direct to garment DTG in which a printer directly applies the ink to the clothing items with inkjet technology. This concept is somehow similar to the printing on papers except that it's on t-shirt or sweatshirt. The desire design is printing directly on to the garment hence direct to garment with a special printer using ink which are absorbed by the fiber of the garment. It will print the desire design on to the sweatshirt or t-shirt directly. It will have low cost of about half to make it most affordable direct to garment printer. Tools that will be used in the project are:

- Printer Head
- Arduino UNO
- Epson Printer
- Ink (CMYK)
- Arduino Programming
- Python/c++
- Motors

669. AUTOMATED YIELD ESTIMATION OF KINNOW

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

Kinnow is considered to be one of the most commercial fruits of Pakistan. It is cultivated on a large scale in Punjab Province and make a huge contribution to the overall economy of Pakistan. Pakistan

generates a good revenue from the exports of Kinnow and the production of Kinnow is 60% in the total of citrus fruit production. Pakistani firms estimate to produce 2.2 million tons of kinnow during the current season and will export 20% of it, which can help to earn a good ratio of profit from it. To generate maximum profit from Kinnow export we need to have an estimate of kinnow production. At the present, the estimate is performed manually which include issues of inaccuracy, inefficiency and cut down the profit. Our aim is to develop an automated yield estimation system of kinnow to help farmers hire required labor for harvest and prevent time and cost constraints. Farmers having an estimate of kinnow can help them in dealings in the market beforehand to earn profit. Yield Estimation is performed using dataset of images. The images are preprocessed to enhance information. Image processing is applied to identify objects (kinnow) from given dataset. Count of objects (kinnow) is estimated through Machine Learning Algorithms.

670. CITRUS LEAF DISEASE DETECTION

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

Agriculture is a component of Pakistan's economy as it provides the raw materials for industry down the line and helps alleviate poverty. This sector has contributed 19.8 per cent of GDP and remains by far the largest employer to absorb 42.3 per cent of the total labor force in the country. Currently, citrus fruits are grown in Pakistan on an area of 206,569 hectares with a production of 2.36 million tons in 2015-16. Citrus fruits are divided into different groups of sweet oranges, mandarin, grapefruit, lemon and lime which are commercially grown. The agriculture sector of Pakistan has been producing vast amount of citrus fruits. Considerable amount of Kino is produced throughout the entire region of Punjab and it supplies 2.3 million Kino per year. The agricultural institutes state the loss of citrus production have increased in the last few years, due to the spread of citrus diseases, causing fruit and in some cases whole tree to get infected, making it a non-consumable product. More than 98% of citrus fruit is produced in Punjab and 70% of citrus fruit is produced in Kino. In fact, in the country, Kino monopolized citrus farming. Unmainted fields of citrus fruit result in rotten and useless crops. Not every farmer has proper knowledge of the disease that citrus fruit can process. This results in great loss of economic resources of the country. Providing services to every field to check whether the crops are suffering from disease, which makes managing the fields difficult. Citrus fruits are infected through the leaves which are contaminated due to diseases like citrus canker and citrus greening. Escalation of such diseases leads to the ruin of citrus fields which can cause farmers to lose a considerable amount of income. Detection of such diseases can save citrus fields which will, in turn, lead to effective growth in Pakistan's GDP. As the agriculture sector contributes 42% in the entire GDP. For the detection of the diseases, we will use a rear RGB camera of an android cellphone. The image taken from a camera will be subjected to image preprocessing. Features will then be extracted from the image and through these features, machine learning algorithms like SVM, K-MEANS and CNN will be able to classify and detect the disease.

671. STRAWBERRY PLANT COUNTING

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

are designing a system which will help in increasing yield of strawberry plant we not only count total number of strawberry plant but also total number of free spaces between them with their exact coordinates. This will help former to fill up free spaces. Usually the small growers take 2-10 acres of land under varying contracts to cultivate the fruit. Almost 40,000 per acre Strawberry small plants planted in mid-October every year, the fruit is usually ready for harvest in January. By mid-February the harvesting gets in full swing only to end in April. Our farmers don't use seeds but instead they use plants. When the rain comes, the real problem is faced and the plants get ruined. After that the farmer had to replace the ruined or dead plants with the new one and the empty spaces had to be filled. In Pakistan, nearly 10,000 plants per acre are spoiled in each harvest every year. So our idea is to count total number of alive strawberry plant and detect total number of spoiled strawberry plants and also detect empty spaces and their respective location through GPS co-ordinates.

672. TPS MAZE KING ASSASSIN HUNTER LIVE MULTIPLAYER ANDRIOD/IOS GAME

Project Advisor	MR. ALI AYYAZ / Mr. AMAN ULLAH JIFFREY
Status	Complete

There are games developed like PUBG, CALL OF DUTY etc. that cannot be played by children's like from 8-15 years old and people who are not having good mobiles cannot taste flavor of that type of games and the games that are available on iOS, google play are not live tps multiplayers games as well as have no good affects. So the game we are building is an optimized game enhancing the reflexes of children's as well as first time introducing live multiplayer game in the category of hunter assassin hunter game also having different maps and using machine learning for creating the rooms that are appropriate for the player set of skills as well as giving with the environments that are not present in this category of game. Game development scope recently increased very much in computer science. With each passing day the games are becoming optimized and unique to conquer in this very big market. The game we are building is third person live multiplayer hunter maze king game that will be highly optimized (60-90mb) with 60fps and will be the only game developed for low mobile specs and covers the 90 percent of mobiles in the world for android and iOS as well as it also good for the brain and reflexes as it consists of different maze maps so this game will change the trends of big games to small games capable of having all functions on play store and apple store.

673. D FOR DANGAL

Project Advisor	MR. ASIM RAZA
Status	Complete

Dangal (Desi Wrestling) has been one of the very famous sports especially in Punjab region of Pakistan and India. But now a days we hardly see any desi wrestling in Punjab because of the lack of funds and proper management of this sport. Our goal is to develop a multi-player 3D game which is a digital and virtual reality-based version of traditional Kushti. Because in Pakistan, the interest of people towards our culture is decreasing day by day. Development of Dangal will contribute in generating the interest of people towards our cultural game. It is a well-known fact that currently people love to play games on their phones, computers, and laptops. Typical genres of games include action, adventure, role-playing, simulation, strategy, sports games, idle games etc. Our game (D for Dangal) falls under sports and action category of games. Currently action games are developed as platform games, shooting games, fighting games, survival games, battle royal games etc. Our game "D for Dangal" is purely reality-based game and with real moves and characters. Our local culture comprises of sports activities, i.e. purely fun-based like Bandar Killa, Gulli Danda, Bantay etc., and physical activities that demand sound health e.g., Desi Kushti (also called Dangal). Desi Kushti is primarily a multi-player game generally comprised of two types of activities: training and combat however, combat phase takes two forms, i.e. one-to-one Dangal and Dangal as tournaments. The playing field is called Akhara and there are specific moves, different than general wrestling. One of the primary focus of Desi Kushti is to prepare a person's physical health and his character about how to use physical health in order to defend his community and to serve his community, whenever required. Our proposed game "D for Dangal" is actually a 3D game intending to develop a digital and virtual reality-based version of traditional Kushti. It consists of three phases: training, exercise, and Dangal. In training phase, user (wana-be Pehalwan) goes through preparation of eatable like breaking almonds and walnuts. Then during exercise phase, the user performs sit-ups, push-ups, squats, cover a distance with weight etc. in order to gain points and to shape his body structure by developing muscles. And finally, in the Dangal phase, he faces his opponents.

674. TEACH P FOR PROGRAMMING

Project Advisor	MR. ASIM RAZA
Status	Complete

In this project we will develop a learning base game in we will teach the student/player that how to relate programming problems to the real world. This game will help those students who are facing problems in logic thinking, problem solving and concepts about the programming. This game is divide into two parts. Each concept is one animation video for teaching and three animation videos for evaluation. These five different types of the concepts comprise of five stages for the proposed game and there is a result-card instead of scorebook. So, after playing this and getting all the concepts properly will help the student to solve different problems easily by just learning the syntax of the languages. This project contributes to achieve good skill- development of the students. In the first part

(training) an animated video will be shown to the student to learn the basic concept and then in the second part (test) we will evaluate the student that how much he/she grasped the concept or is he/she understands the problem completely and then according the performance a scoreboard will be displayed on the screen so the player will keep track that he/she performed.

675. EPILEPTIC SEIZURE PREDICTION USING MACHINE LEARNING METHODS AND NEURAL NETWORKS

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

Epilepsy is a neural disorder in which patients experience seizures (patients become unresponsive and unaware of their actions). There are over 50 million patients worldwide, majority being people from underdeveloped countries. Biggest problem caused by the seizure is the involuntary movements of the body which may lead to fatal injuries. An epileptic seizure cannot be stopped; however, we can minimize or eliminate the damage caused by the seizure if we know it is coming and take appropriate measures [1]. To predict the seizure, we will try to use neural networks and other machine learning techniques on EEG data of patients. For the dataset, we are using CHB-MIT Scalp EEG database. This is a publicly available dataset which is being used for research purposes. We will try to get a higher accuracy with our proposed model and publish our findings in the form of a research paper.

676. PNEUMONIA DETECTION FROM X-RAY USING IMAGE PROCESSING

Project Advisor	MR. HAMMAD UL QUDOOS
Status	Complete

Medical images diagnosing can be error-prone for inexperienced radiologists, while tedious and time-consuming for experienced radiologists. Pneumonia is one of the most serious health problems in the world field, with a gradual increase in the number of deaths every year. We build an application to automatically identify whether a patient is suffering from pneumonia or not by looking at chest X-ray images. In this project, we will develop an application that will detect the Pneumonia from x-rays images. We develop this application for our population, accurate and fast diagnosis means everything. It can save much needed time and money for those already experiencing poverty. Therefore, we build an application to automatically identify whether a patient is suffering from pneumonia or not by looking at chest X-ray images. In this desktop application, user receive the chest x-ray from x-ray film, which is connected to system. When x-ray comes to our desktop application, here that x-ray image will compare with data set image to identify whether the patient is suffering from pneumonia or not.

677. SKIN DISEASES DETECTION USING DEEP LEARNING

Project Advisor	MR. HAMMAD UL QUDOOS
Status	Complete

678. FASHION RECOMMENDATION SYSTEM USING DEEP LEARNING

Project Advisor	MR. HAMMAD UL QUDOOS
Status	Complete

Fashion is an extremely dynamic and ever-changing industry. Everyone has own taste or wearing. We are designing an algorithm to detect people fashion automatically by applying Region base-segmentation. Our algorithm will take a clear image as input and apply segmentation on the image and identify each part of dress such as pent, shirt, coat, waist coat, shorts, glasses, female tops. And then it can tell which dress is trending the most in market. Our system will provide above facilities to every individual, fashion designers and brands to get the latest trending fashion in the market or to Review the trending products of the market. It's not mandatory for each individual to be an active user of social sites he/she can easily check the trending night wears, days wears, party wears, office wears etc. For this we will use machine learning, Artificial intelligence, python programming and image processing.

679. BREAST CANCER CLASSIFICATION AND IDENTIFICATION

Project Advisor	MR. IMRAN ARSHAD CH. / MR. MOHSIN SAMI
Status	Complete

Breast cancer is the second most common cancer in all over the world. There are many researches on making the diagnosis of the breast cancer digital. However, there are still some flaws in the diagnosis reports due to unavailability of the proper dataset. Our motive is to develop a desktop application which will automate the process of breast cancer classification from mammographic images. Breast cancer is second most common type of cancer around the globe. Mammographic images are very useful in detection of breast cancer. For detection of unusual growth of tissues and blocks of blood can be seen in mammographic images. It is somewhat time consuming and difficult task sometime performed manually by medical experts. Over the last decade, from various research results it is being observed that it is very time consuming method but it will get faster if we use image processing techniques. Different breast cancer detection algorithms have been developed in the past few years.

Normally, CAD (Computer Aided Diagnosis) is very challenging and it is yet to be fully and satisfactory solved. The main aim of this system is to make an automated system for detecting and identifying the breast cancer cells from normal mammographic images. In a mammographic image the highly irregular boundaries of cells and tissues are seen. We will detect the tumor which will help the patients in future about how much probability of presence of breast cancer is there with greater than accuracy.

680. SIGN LANGUAGE COMMUNICATOR

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

The people with special needs, such as deaf and mute face many difficulties to become self-assured in front of normal people. This speaking/hearing disability makes a person uncertain and at that point, they lose their confidence. These disabled people use visual language (achieved by hand gestures, movements of arms and body language) i.e. Sign language to convey their message. It is difficult for a normal person to understand it clearly. Therefore, to remove this gap of communication we have proposed a solution to develop a system with an android interface by using some python modules and algorithms including dataset, image processing, and machine learning. This system is a two-way communicator which will help two people with different abilities to come and communicate with each other confidently. This system is divided into two components. The first component consists of text to ASL conversion in which input has been taken in the form of text in the English language i.e. some limited words and then words are mapped with equivalent ASL gestures. The second component consists of ASL gestures to text conversion from a real-time video and then it will be mapped in text. This system will facilitate all people and make communication more effective.

681. QUERY SOLVER FOR E-COMMERCE

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

We are designing a web base system for the customer care side of many e-commerce businesses. As we knew that the traditional way of handling customers and their queries are difficult and less efficient. So, this motivate us to give some better solution. The knowledge area that this project will touch are Web development and design, machine learning, deep learning and in the result, we will get an intelligent system that can handle queries of automatically. Now a days there are many e commerce sites, and most of the people do online shopping and mostly we buy things by seeing different advertisement on social media (like Facebook, Instagram etc.) and contact them on their official page or account. Now it is difficult to read and reply thousands of messages from different social applications because most of them are little companies with few employees and delay or not replying

may cause customer dissatisfaction and trust loss. So, we come up with a solution that we develop a web application which will integrate these social applications and embed our web application with a chatbot that will automatically read and reply with a most suitable answer. Also, we will provide a sentiment analysis regarding the product and service of the company on the bases of acquired data in order to tell them where they are lacking or where they need improvement.

682. DETECT PAIR OF OBJECTS IN PARTICULAR RELATIONSHIP

Project Advisor	MR. IMRAN ARSHAD CH. / MR. MOHSIN SAMI
Status	Complete

Our basic idea of project is the detection of objects in a particular set in a picture. Our software will help to identify the Objects and Human being in the picture. However, Detecting isn't the main problem we are focusing. The purpose of our software will be tell the relations between Human and the Object. The interaction between an object and human is the main part of our software. It will help in surveillances for instance in Bank, Streets. An Artificial Intelligence system that identify different objects (man and cup) is an important problem on its own, but identifying the relationship between them (holding) is critical for many real-world use cases. In this Visual Relationship Track, we are going to build an algorithm that detects pairs of objects in particular relations: things like Woman sitting on chair, "Man holding a cup".

683. EZDESIGNER

Project Advisor	MR. IRFAN ANJUM
Status	Complete

We are building an embedded system which will be used to plot drawings, digital images and shapes including numbers and alphabets by giving the input through the computer/laptop. It is generally noted that it takes a lot of time and effort to draw complex diagrams but this machine will save that time and effort of the professionals like teachers, students, artists etc. We will use Arduino Microcontrollers, Motors and Soldering Iron in this project. Professionals including teachers, students, designers etc face issues due to the lack of digital equipment in their working space. They are supposed to draw complex diagrams which might not be accurate and might not fulfill the purpose. For example, a teacher has to show students a few diagrams in the class but it takes a lot of time and effort. To minimize this problem, we are building an embedded system which will be used to plot drawings, digital images and shapes including numbers and alphabets using Arduino Microcontrollers, Motors and Soldering Iron. It will perform its tasks in seconds. Arduino is an open-source electronics platform based on easy-to-use hardware and software. The cost of the proposed system will be low and we believe that we can contribute to the society and especially educational institutes through our project.

684. MOCK EVALUATOR

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

Students graduating from universities usually do not have much experience with job interviews and so the majority of them are nervous and anxious about it. This leads to low performance in interviews despite knowing the correct answers. As a result, students fail to get their dream jobs. Mock evaluator will help such students by conduction of mock interviews using frequently asked interview questions of various difficulties. For now, this web-based system will focus on computer science domain only and will conduct these mocks in a controlled environment using facial and speech emotion recognition. In the end the system will be able to tell if the candidate is comfortable or not. Repetition of these mocks will increase his comfort level for the real interview by boosting his confidence. Mock evaluator will be a system that will perform a CS mock final evaluation (interview) by using facial and speech emotion recognition. In this version of the solution, we will first develop a web-based system in a controlled environment (system, camera, mic). The system will contain different computer science domain questions of various difficulties, and on the basis of analysis, the system will assess the candidate.

685. ZIPPEDMEAL KEEP IT ZIPPED

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

In Pakistan, the development in bigger cities is faster than compared to smaller cities, which puts pressure on students and workers to migrate to the bigger city, away from their homes. One of the major problems they face after migration is the fact that they cannot have the luxury of home cooked food and they are forced to eat from restaurants nearby which not only worsens their health but also affects their monthly budgets. As there is a lot of potential of good taste in food among the housewives, though they cannot earn from it because they are too shy to go out and work or elsewhere. We are providing this platform for the kinds of people mentioned above. We will be making a mobile app using a hybrid language (flutter), in which we will be making two portals, one for the cooks and one for the Customers. Customer can order food of their choice from the category of food or they can even give a customized order to any cook who is available nearby, he/she can also hire a cook for a certain time for his customized diet and he/she can also see the food available nearby through maps in which we will use recommender systems. Once the food is delivered through certain delivery company, the payment method will be both cash or online. The customer can pay through cash to the delivery man or the customer can make your payments online through a secure means.

686. THE POLICEMAN TRAINER VR

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

We need to make this VR simulation because many situations occur where their the normal police training get failed because they are not involved in that critical situation that can happen in real life before and the trainings they get in the training centers are not feel so real, so we will create a VR simulation that help to train the officers in many real-life critical scenarios. With help of the VR technology we will be able to create a real-life scenario and try to make a demonstration of critical situation. The officer will find the situation realistic and that is how his capabilities will be tested. The VR head gears and weapons will be given to the officers and with the help of head gear officers will able to see immersive virtual world and the officer will interact by moving around the scene and killing enemies. This technology is less costly then training with real people and dummy weapons. It will be portable and will be easy to set up it in any police training center.

687. SKETCH AND GOLIVE

Project Advisor	MR. NABEEL AHSAN
Status	Complete

688. SERVITOR

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

689. DETECTION OF BREAST CANCER USING GRUNWALD-LETNIKOV ENHANCED IMAGES

Project Advisor	MR. SAAD AZHAR SAEED / MR. ZAIN-UL-ABADIN ZAFAR
Status	Complete

Breast cancer is one of the most common forms of cancer and causes the greatest number of cancer related deaths among women. Early detection of breast cancer can improve treatment and chances of survival. Mammography is the cheapest and the most common test used for preliminary diagnosis of

breast cancer. Detection of breast cancer from whole mammographic images presents a real challenge because of low contrast and varying breast densities. Computer Aided Detection (CAD) is needed to guide the radiologists/clinicians. We propose an affective model to detect breast cancer from whole mammogram images using neural networks. The convolutional neural network (CNN) will be trained using Grunwald-Letnikov enhanced images. A desktop application will take mammographic image as input and predict the absence or presence of breast cancer using trained model.

690. ASAAN KISAAN

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

ASAAN KISAAN is an android based application which will deal with the problems of farmers regarding hiring labour and machinery. This application will be built using android studio. Firebase database will be used to store data of labour and machinery. Data will be managed through admin panel. Application will consist of two interfaces one for the users (labour, farmers and persons who have machinery) and other for the administrator. Today farmers are facing some difficulties in our country. Farmers often do not have the sufficient labour and machinery to harvest their crops. Our motivation is to create a project that will aid the farmers in making the overall farming and harvesting process easy and digitalized. Farmers will not have to go to hire labour and machinery using our application. This can also aid the farmers from backward areas who do not have access to sufficient labour and machinery resources. Our application will also help labour in finding work, as labour is mostly unemployed in Pakistan. Machinery owners can also use the application to find work regarding harvesting crops. Application will consist of two interfaces, one interface will be for users where they will create their accounts and will mention what is their purpose are they labour, have machinery or they want to hire. Initial knowledge which is required for this project includes programming skills and knowledge of android studio.

691. POOL CHARITY

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

In charity people have the serious trust issue that if there donation is going to the righteous person or not because of this problem the real deserving people are not able to get chose to be donated so, due to lack of the proper platform for the transparent charity we are going to design a website and mobile application platform based on the crowd funding that will make it easier for the needy people who need small amount of charity to broaden their network online by connecting theirselves to the large number of donars who are ready to help. by helping and pointing out right individual we provide trust worthy service the outcome of this platform is to ensure the awareness of crowdfunding in the people of Pakistan. Our vision is to build a better platform for charity by collecting the small amount from large number of people. In the other countries Crowd Funding has been implemented and is being practiced frequently. For example (gofundme, indiegogo, kickstarter, facebook, fundly, justgiving). Our platform will help the people to calculate their zakat and choose the people which are eligible for zakat. Sometimes the military or police

persons who die in the line of the duty and the government announces a reward for their families but mostly these people do not receive the amount so our platform will ensure that the families will be able to receive that amount. **Prophet Muhammad (Peace be upon him)** us that “Indeed there is a right(for poor) in the wealth in addition to the zakat”. In Pakistan we do not have any platform for Crowd Funding. There is being a total raise of Crowd funding worldwide around 33.4 billion USD dollars from which there is nothing being donated in Pakistan.[1] We will provide Charity funding for the needy people that can be used to educate the people in Pakistan and we can also help the hospitalized persons who cannot pay the expenses for example (medicines bills, hospitals fees, education fees). As it is said by **Prophet Muhammad (Peace be upon him)** ”The best charity is that given by one who has little”. So we provide our customers a transparent way to donate money conveniently through Crowd Funding by application with friendly user interface.

692. SCHOOL TRANSPORTATION SYSTEM

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

STS is a software base project which will manage and provide the safe transport to students and peace of mind (satisfaction) for parents that their children are safe and secure. STS will automate the route optimization and with the passage of time System set the students arrival time and departure time and prediction of students through machine learning and capture the behavior of driver. STS is an Application and Artificial Intelligence (AI) based software which will provide a secure and safe transportation system for school students. In this project (STS) will automate the route optimization through schools-wise, area-wise and provide smart transport solution and with the passage of time System set the students arrival time and departure time through machine learning and in future system predict that today this student will go to school or not. STS will provide smart watches (or some gadgets) to trace the live track and send real-time. Notifications to those Students who are enrolled in the system through school management. Parent's will also track the live location of their child and get notification of his/her arrival and departure. For instance if a student does not want to go due to personal reasons, his/her parents can inform (STS). (STS) have customized buses that will accommodate students by giving facilities like authorized Entry/Verification to enter the bus by scanning the QR code embedded on the buses. (STS) will also be trained to capture the behavior of the driver by using facial recognition module which will monitor the behavior of the driver that they drive safely or not. And why they drive over speed and why they drive too slowly.

693. BIKE BACHAOO

Project Advisor	MR. SAJID HUSSAIN
Status	Complete

We are trying to implement a project in which we are providing a navigation of a bike system. The System will lock the bike and will ensure the security of bike through password or thumb identification. The system provides us the navigation system to track the bestest traffic route ,This project will be used for the entertainment purpose too as we are going to implement a design that any person can listen the song or receive calls by just connecting Bluetooth to the system we designed. We

are going to eliminate the old bike screen system with new bike screen system which includes (speedo meter, navigation, lock system, Bluetooth).

694. HOSHIYAR AWAAM

Project Advisor	MR. SARFRAZ RAZA
Status	Complete

Accountability of the state is the issue of Pakistan. Lots of institutes of Pakistan are not working properly and not giving proper services to the public. Only public representatives (Local body members including chairman, vice chairman, counselor) and higher authorities (MNA, MPA etc.) can do accountability of the state because they have that power after elected by the public. Now there is a huge communication gap between Pakistani public and elected representatives (Local bodies and higher authorities). Moreover the Unavailability of the elected representatives (Local bodies and higher authorities) in the region is also the major issue. Issues of Pakistani public in their respective region are being ignored and delayed by the state. For the accountability of the state there is only a single institute called NAB (National Accountability Bureau) which is also the part of the state therefore the state itself cannot do accountability of the state. Therefore corruption in our country is increasing day by day. Now to expose the negligence of state and politicians we are providing a social platform to the public so that the public becomes powerful and be able to highlight their issues of their region in our platform using different facilities like text, videos, voice chats etc. In our application the public will be directly connected with the politicians (Local bodies and higher authorities) of their regions. Mainly the focus of that platform is to raise the voice of the common masses and to create pressure on politicians by posting their issues and make it trend on our platform.

695. ACID RADICALS RECOGNITION (CHEMISTRY PRACTICAL) GAMIFY

Project Advisor	MR. SARFRAZ RAZA
Status	Complete

In this project gamified chemistry practical's for acid and basic radicals will be developed. Through gaming based learning experience students can easily capture the true essence of the practical. While at the same time it will make the processes of teaching as well. This project comprises of a very key part of compulsory Intermediate chemistry practical's taught in curriculum which is analysis of acid radicals (Dilute Acid Groups which are Carbonate (CO_3^{2-}), Bicarbonate(HCO_3^-), Nitrite(NO_2^-), Sulphite(SO_3^{2-}) Thiosulphate ($\text{S}_2\text{O}_3^{2-}$), Sulphide (S^{2-})). The identification of radicals has a perspective which applies broadly to other related practical's as well. Gamifying this subject practical will enhance the intellectual level of the learner through providing all the potential combinations and their perspective outputs.

696. SMART INDOOR HYDROPONIC CHAMBER GARDENING

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

World population is increasing day by day and so do the hunger world has less resources to fulfill the needs of the food as there are less fertile lands compare to infertile lands. Moreover, the environment is facing drastic changes which also effects the growth of the plants. To overcome all these problem we purpose an idea of **Smart indoor Hydroponic Chamber Gardening** which will not only grow plants without soil but also be smart enough to provide all the essential nutrients which plants needed to grow and the environment of the plants in which they grow will also be controlled in this chamber. This is done using sensors which are controlled by a Mobile Application.

697. BLOCKCHAIN BASE COPYRIGHT SYSTEM

Project Advisor	MR. ZAID MUNIR
Status	Complete

User personas involved in Block chain based fake news platform:

1. News Agencies – Who will provide news to the editors/publishers/journalists for publishing?
2. Journalists – Who will upload the images or video on the platform?
3. Modifiers or Editors – Who will write, modify and publish the news on the platform.
4. Crowd Auditors – Who will approve or mark news item as spam by scanning the QR barcode on it.

Front-end components:

1. Native Mobile application for crowd auditors and journalists.

Backend Technology:

1. Block chain component
2. Micro services Programmed using Node.js
3. IPFS (Interplanetary Filesystem), used to store data in the distributed database.

The block chain enabled platform can be used to verify any information regarding live news events, viral images and content moderation.

698. E-CARE: PREDICTION OF HEART DISEASES

Project Advisor	MS. MARIA ZAFAR
Status	Complete

Heart Diseases is one of the major causes of death worldwide. Many health and lifestyle factors are associated with heart disease including high blood pressure, high cholesterol, sleep quality, stress, physical activity and smoking. It can be prevented by improving these health factors. Predicting the heart disease accurately, timely and precisely is an important task and can improve individual's treatment and long term survival chances. Poor examination and medical diagnostic errors are costly and dangerous that lead towards death. The proposed desktop application will be able to predict heart disease by using different health factors and attributes without wasting time our trained model then predict based on inputs for presence or absence of heart disease. Also mobile health application is used to promote healthy behavior and life style and in turn as an enabler tool for preventing heart diseases. The goal of this system is to aid the doctors/cardiologist/specialists to boost the process of diagnosis and promote healthy behavior and life style by predicting diseases timely and accurately and reduce the number of erroneous diagnoses that harm patients.

699. REAL-TIME LANDMARK RECOGNITION FOR TOURISM: PILOT PROJECT FOR LAHORE (F20)

Project Advisor	DR. ADNAN N QURESHI
Status	Complete

Our project will have a huge impact on the revolution of the tourism industry in the sense that tourists will be able to get free of cost guidance and they will be able to know about the landmarks and their brief description (extracted from a source e.g., Wikipedia) either via text, voice assistant or both in our real-time landmark recognition mobile application. Our landmark recognition model will be recognizing landmarks with high precision at any time of the day and on different scales giving consistent user experience and availability in obvious scenarios. It will be fast enough to work with our real-time application. The nature of our end product will be in two forms: first will be the research work done which will be first of its kind for Pakistan and achieve better performance than its global competitors in terms of variance in size and angle. Lastly, a mobile application that will be the end product of our research will be recognizing landmarks in a real-time environment, acting as a guide for tourists and people who want to explore the landmarks of Lahore.

700. ON-DEMAND RESEARCH PAPER LOCATOR

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Complete

It is very time-consuming and monotonous for researchers and academics to acquire, read and filter the most significant research papers suited for their research because it requires searching through various sites as well as evaluating several, sometimes hundreds of, papers to find the relevant papers. Initially, we will stick with [Semantic Scholar](#) to scrape only open-access research papers, and maybe later, we will attempt to extract papers that are present on IEEE and ACM sites as well. We can also use Scopus API to gather the required information for a particular paper (e.g., title, abstract, DOI, authors' names, keywords, citation count, publisher, etc.). As for text analysis, we will use a Deep Learning based Text Similarity method to check the relevance of a paper providing the user search criteria.

701. DETECTING RASH DRIVING BEHAVIOR USING COMPUTER VISION

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

Our software utilizes a single wide-angle camera placed at a certain height on top of the road while facing towards the front of incoming or back of outgoing traffic. It detects vehicles using computer vision, after their detection the software will determine the speed using algorithms, it will also detect the position by comparing it to a pre-placed marker of known distance. If the vehicle is swerving unnecessarily and getting too close to other vehicles, such vehicle's data will be kept in a database to allow local authority to take further action. Road safety has been an issue for as long as cars have been in existence. Many accidents happen on a daily basis due to rash driving, most of which are preventable. This has impacted the environment in a major way, more physical presence of patrolling force is required for detecting rash driving cases. The main objective of the system is to provide a digitized environment where the physical presence of the policemen is not much required. This system will be providing much better road safety and better law enforcement can be achieved. The system will be directly leading to a reduced expenditure spent on damages caused due to accidents.

702. SELF-ORGANIZING DEEP REINFORCEMENT LEARNING FOR TASK LEARNING

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

The Deep Q-Network algorithm is used in our product (agent). Our product's main purpose is to determine the best policy to use in a given scenario. If our agent fails or performs poorly, he receives a negative reinforcement (award), and if he succeeds or performs well at the end of the episode, he

receives a positive reinforcement (award). The weights of the Neural Network are modified using these reward agents. To save their memories, agents use a strategy known as Experience Replay. We can also solve a 2D maze using this algorithm. Now our agent does not need to always learn from scratch and explore the environment because the agent is capable of saving its memory and with the help of this our agent saves the rare occurrence of any event. Saving the SARSA tuple help agent to perform well and to learn more.

703. SELF-ORGANIZING NEURAL ARCHITECTURE FOR VISUOMOTOR LEARNING

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

In this project, we present a self-organizing neural architecture that learns to recognize human/robot-object interactions from videos. The proposed architecture consists of two main network streams processing separately visual representations of the body postures and of the manipulated objects. The information from the two streams is then combined for developing action-object mappings. A second layer, where the two streams are integrated, combines the information for the development of action-object mappings in a self-organized manner. In present there are robots who only perform predefined tasks. When moved to a different environment they had to get trained according to that one environment there is no such robot that could learn depending upon his past events i.e. Episodic memory. In this project, we present a self-organizing neural architecture that learns to recognize human/robot-object interactions from videos.

704. MAP MERGING FOR MULTI ROBOT SYSTEM

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

Our product is to design a system in which multi robots will be able to detect objects/obstacles in the environment create their own individual map using grid base fast SLAM algorithm with Kalman filter to solve simulation and localization problem, collaborate with other robots, merge the maps that are collected by the different robots using scan matching algorithm. It will help the people who want to make map of their building in observing the environment with less human involvement. It also uses in agricultural industries so that they can detect their fields by using drones /quad copter and those people who want to make indoor map of their buildings.

705. HOME GUARDIAN

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Complete

As the person gets old his body becomes fragile and is affected more severely as a result of a fall. In many cases the damage is escalated because either the elderly is living alone or because no one is nearby at the time the incident takes place. The project is basically a framework we're creating that would provide emergency services to the people and we are taking a start from fall detection. The fall detection system is specifically for the elderly people either living alone or have no one to keep an eye on them all the time although it could also be used by the handicaps. The approach we've taken is Sensor based, due to a number of reasons such that it is relatively cheap and has no privacy concerns unlike the vision-based approach. The goal is to accurately detect a fall and provide the emergency services to the affected as soon as possible. To carry this out an SMS service would be used and as soon as the fall is detected a sms would be sent to the emergency services centre as well as the guardian. An application needs to be designed where the user would be able to sign up for the services being provided and a fall detection circuit needs to be developed that the user would wear. The components required for the circuit include (Accelerometer/Gyroscope), Breadboard, Arduino, GSM module, WIFI Module and a battery to provide power to the circuit. One of the biggest challenges in fall detection is the accuracy of falls so multiple algorithms need to be applied and tested on the system in order to get most accurate results. According to several researches, the combination of accelerometer and gyroscope data has proved to determine falls more accurately as compared to any of the sensors alone since accelerometer measures kinetic force and gyroscope can help to estimate current posture. In the wearable devices, a fall is distinguished from daily life activities so there are extremely low chances for a false fall detection. Such devices are often rejected by the elderly people because of the difficulty of wearing it but irrespective of this, there are many other advantages such that they're cheap, easy to operate and set up.

706. UCP AUTOMATION

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

Our product would be a control and monitoring system comprising of sensor/actuator nodes that would be operated from a central controller to enable us to remotely control different types of electrical appliances in UCP, including fans, lights, projectors, and ACs, along with locking/unlocking the doors, from anywhere within the University premises. The system will also check the room occupancy while putting electrical appliances ON/OFF in classrooms, labs, offices and corridors. The monitoring/control would also be possible through a Mobile App. The duration of use of each electrical appliance would be recorded in a database for further processing, i.e. total electrical consumption and usage patterns. To develop and implement an IoT based automation system for UCP that is able to remotely control and monitor the state of various door locks and electrical appliances, such as lights, fans, ACs, projectors, etc. in UCP class rooms, labs, offices and corridors. The system

will provide the ability to put the various electrical appliances ON/OFF according to the UCP timetable, and based on the time of day and room occupancy. This will ensure better utilization of resources while reducing reliance on human intervention and lowering the electricity consumption for cost saving.

707. UNDERWATER ROBOT NAVIGATION

Project Advisor	DR. SYED ATIF MEHDI
Status	Complete

There are many human tasks which are now being done by robots like waiter robots, agricultural robots, etc. So, we came up with the idea of making an underwater robot that can travel in underwater within the specific points defined by the user and it will detect and avoid the colored (Red, Yellow, Green) obstacles in its path. We aimed to make a robot by ourselves but due to unfortunate circumstances like the covid-19 situation, we couldn't complete the assembling of the robot. So, we bought the pre-assembled robot and modifying it according to the requirement of our project. We will be first making the simulation of our robot to avoid any kind of lack before our final run of our project. We are making the simulation of our robot using the unreal engine 4 tools and then integrate it with ROS (Robot Operating System) for navigation and mapping in our simulated environment. We will be using the A-star search algorithm for the mapping of our environment.

708. EXPERIMENTS SIMULATION (PHYSICS)

Project Advisor	MR. AMAN ULLAH JIFFREY
Status	Complete

Experiment Simulation will provide the knowledge of fully working of the practicals and how they are done. We are mostly doing "Electricity" Practicals in which students can interact with the simulation and do the practicals. We will provide them with the scenarios and the step by step guidance to make them fully understand what's going on. They can do the practicals again and again without any extra costs. Our project is a module for an open-source product named "Tajrubah-Gah", which is intended to be used by millions of students all-across the Pakistani high schools and colleges. If implemented correctly it could solve many problems that the vast majority of the students face, which includes; Lack of adequate equipment.

709. THE EFFECT OF FORCES

Project Advisor	MR. AMAN ULLAH JIFFREY
Status	Complete

In this pandemic era, there are many students that are not able to study and learn as everything is subject to the lockdown. There are also millions of children that are unable to go to schools due to financial issues. Further, the majority of schools in the country do not provide adequate science labs nor lab instructors, due to which students have to resort to other means to pass their science subject examinations. We see that students are not performing well in the practical examination, because they don't know how to perform. In our schools, teachers and demonstrators do not teach the students well how to perform the experiments, and, in fact, in some schools, they simply do not teach the students due to the lack of apparatus. Science is an empirical field of study, doing experiments to confirm, refine or refute hypotheses is a basic part of the scientific method. It is a tragedy that millions of our science students are not being trained to use the scientific method. As a result, they are unable to connect their theoretical knowledge with nature and with practical applications in technology.

710. DIGITAL CHHUPPAN CHHUPAI KHAZANA

Project Advisor	MR. ASIM RAZA
Status	Complete

Our problem statement seeks to answer the question of whether we can adapt Chhupan Chhupai for newer generations using techniques of 3-D game development. We came up with the idea of developing old culture buildings (Daak Bunglow) in a 3-D digital game which will help to preserve and bring the newer generations closer to our culture that we are rapidly losing. The subcontinent folk culture is celebrated as one of the richer and more "colorful" cultures of the world which is evidenced by its food, social-norms, buildings and architecture. The specific side of this beautiful culture that we would like to promote one of the folk games that have been played throughout the centuries. Some of these games include Bandar-Killa, Guli-Danda, Pittu-Garam, Chhuppan-Chhupai etc. Our proposed game "Digital Chhuppan Chhupai Khazana" seeks to develop a game based on Chhupan-Chhupai in a 3D setting, primarily inspired by a real site that has a connection with the local culture, e.g. Daak Bunglow, and Haveli etc. The theme of the game revolves around the Mughal and British treasures, precious art objects as well as architecturally significant and valuable objects.

711. ACCELERATED MRI SCANNING

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

MRI scans require long scan times, which can sometimes require patients to remain stationary for more than an hour which leads to low patient throughput, problems with patient comfort and compliance, and high exam costs. This limits MRI technology to some useful applications. The software being developed aims to reduce the acquisition time required by a Traditional MRI machine by collecting a subset of raw data (instead of complete) and generating diagnostic quality scans from this undersampled Raw Data. The end product will be an image reconstruction algorithm that will use different reconstruction and refinements techniques to convert low-resolution scans from under sampled data to diagnostic-quality images.

712. SIGNATURE VERIFICATION SYSTEM

Project Advisor	MR. AWAIS M. LODHI
Status	In Process of Completion

Our product is a windows compatible software which is known as “SVS” (Signature verification system) and it is used to distinguish between real signatures and forged signatures. The area of Handwritten Signature Verification has been broadly researched in the last decades and still remains as an open research problem. This report focuses on offline signature verification, characterized by the usage of static (scanned) images of signatures, where the objective is to discriminate if a given signature is genuine (produced by the claimed individual), or a forgery (produced by an impostor). We present an overview of how the problem has been handled by several researchers in the past few decades and the recent advancements in the field. The offline Handwritten Signature Verification (HSV) problem can be considered as having difficult data since it presents imbalanced class distributions, high number of classes, high-dimensional feature space and small number of learning samples. No wonder that institutions and businesses recognize signatures as the primary way of authenticating transactions. People sign checks, authorize documents and contracts, validate credit card transactions and verify activities through signatures. As the number of signed documents and their availability has increased tremendously, so has the growth of signature fraud. According to recent studies, only check fraud costs banks about \$900M per year with 22% of all fraudulent checks attributed to signature fraud. Clearly, with more than 27.5 billion (according to the 2010 Federal Reserve Payments Study) checks written each year in the United States, visually comparing signatures with manual effort on the hundreds of millions of checks processed daily proves impractical.

713. MASKED FACIAL RECOGNITION

Project Advisor	MR. AWAIS M. LODHI
Status	Complete

714. AUTOMATED ACNE RECOGNIZER

Project Advisor	MR. HAMAD UL QUDOOS
Status	Complete

715. AUTOMATED SHORT-TEXT OPINION ANALYZER

Project Advisor	MR. HAMAD UL QUDOOS
Status	Complete

716. AUTOMATED RICE LEAF DISEASE DETECTION

Project Advisor	MR. HAMAD UL QUDOOS
Status	Complete

717. HEART DISEASE PREDICTION USING MACHINE LEARNING

Project Advisor	MR. HAMAD UL QUDOOS
Status	Complete

718. GHAR BANAO

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

719. BOOKS VAULT

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

720. DIGITAL TRYROOM

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

721. AUTOMATED PROJECT OPTIMIZER AND PRICE GUIDE

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

722. TIMEOUT SECURITY

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Complete

723. AUTONOMOUS FACE MASK ENFORCER

Project Advisor	MR. IRFAN ANJUM
Status	Complete

724. IOT BASED INTERACTIVE SMART REFRIGERATOR

Project Advisor	MR. IRFAN ANJUM
Status	Complete

725. OPTIMIZING SPEED-LIMITS AND ROUTING ON HIGHWAYS & TOLLS

Project Advisor	MR. IRFAN ANJUM
Status	Complete

726. SMART CONTENT MODERATOR

Project Advisor	MR. IRFAN ANJUM
Status	Complete

727. SPOTGARBAGE

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

Waste management in Pakistan is a matter of big concern. According to research, more than 5 million people die each year in Pakistan due to waste-related disease. It is estimated roughly that 20 million tons of the total garbage is produced every year in Pakistan. Pakistan being the 6th most populated country in the world has a lot of consumers and as a result of that, a lot of garbage is produced, and annually, 250,000 tons of waste is being produced by hospitals which are toxic of all the. There is a lack of facilities in Pakistan to maintain the garbage causing hazardous toxins to be exposed thereby threatening human and environmental health. People being exposed to toxic wastes causing different types of skin problems and lung problems. This toxic waste contaminates groundwater. Contaminated water can have a serious impact on all living creatures, including humans, in an ecosystem. It is causing diseases like hepatitis which is a deadly disease. It claims nearly 150,000 lives every year being a direct cause of death or morbidity and it means that over 400 people are losing life to hepatitis every day here in the country.

We are trying to step up from the manual Garbage Management System to the autonomous Web and Application-related interface. For this, we need to train a machine to detect garbage from the image by comparing it to the pre-fed dataset of garbage. But due to a lack of resources, we will first make our dataset by taking manual snaps of garbage heaps and dumps. This application allows people to click an image of the garbage and send the prediction information along with the geo-coordinates (Longitude and Latitude) to the municipality for clean-up by using several tools and real-time detection. The detection will be done using image processing and machine learning techniques. In addition, this application will be doing route optimization and planning for the waste busters trucks. The route will be mapped, for all the pictures received in a specific time slot.

728. WATER MONITORING

Project Advisor	MR. LOVE KUMAR
Status	Complete

729. REAL-TIME ANOMALIES RECOGNITION

Project Advisor	MR. M. BILAL KHAN
Status	Complete

730. NANNIES CARE APPLICATION

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

731. SAFE & SECURE SHIPPING

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

732. INTERNEE.PK

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

733. TRAVEL TRAIN SYSTEM (TTS)

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

734. MATRIMONIAL CONSULTANCY

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

735. REAL-TIME PRIOR EXAMINATION OF JEWELLERY USING AUGMENTED REALITY FOR PURCHASING

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

736. DRIVER BEHAVIOUR ANALYSIS

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

737. SHATRANG AL-SAHAL

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

738. MULTIPLE OBJECTS DETECTION & DIRECTION SYSTEM

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

739. KHUL JA SIM SIM

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

740. ILAAJ ONLINE

Project Advisor	MR. MOHSIN SAMI
Status	Complete

741. SALONZAR

Project Advisor	MR. MOHSIN SAMI
Status	Complete

742. CAR DOMAIN

Project Advisor	MR. MOHSIN SAMI
Status	Complete

743. SMART PLANTATION

Project Advisor	MR. MOHSIN SAMI
Status	Complete

744. AGE ASSESSMENT USING HAND X-RAY

Project Advisor	MR. MOHSIN SAMI
Status	Complete

745. SMART ATTENDANCE SYSTEM (SAS)

Project Advisor	MR. MUHAMMAD AZEEM
Status	Complete

746. BWCS (BLUETOOTH AND WIFI COMMUNICATION SYSTEM)

Project Advisor	MR. MUHAMMAD AZEEM
Status	Complete

747. SENTIMENT ANALYSIS ON MICRO-BLOGGING & ARTICLES

Project Advisor	MR. MUHAMMAD AZEEM
Status	Complete

748. BUILD IT

Project Advisor	MR. MUSTAFA HASSAN
Status	Complete

749. CONNECT

Project Advisor	MR. MUSTAFA HASSAN
Status	Complete

750. PARAPHRASE DETECTOR

Project Advisor	MR. REHAN ABBAS
Status	Complete

751. VIRTUAL PROPERTY CONSULTANT

Project Advisor	MR. REHAN ABBAS
Status	Complete

752. SSC (STUDENT SERVICE CENTER) CHAT BOT

Project Advisor	MR. REHAN ABBAS
Status	Complete

753. BECOMS (BEACON COMMERCE SOLUTION)

Project Advisor	MR. REHAN ABBAS
Status	Complete

754. CAR O'CLOCK

Project Advisor	MR. REHAN ABBAS
Status	Complete

**755. ABNORMALITY DETECTION IN MUSCULOSKELETAL RADIOGRAPHS
USING DEEP NAURAL NETWORK**

Project Advisor	MR. SAAD AZHAR SAEED
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Status	Complete
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756. THE SHIPPING SAINTS

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

757. DEEP LEARNING TO IDENTIFY ACL/MCL INJURY

Project Advisor	MR. SAAD AZHAR SAEED
Status	Complete

758. AUTOMOBILE RECOGNITION USING DEEP LEARNING

Project Advisor	MR. SAEED IQBAL
Status	Complete

759. SODAA

Project Advisor	MR. SAEED IQBAL
Status	Complete

760. BOLTY HATH

Project Advisor	MR. SAEED IQBAL
Status	Complete

761. MARGAIOCHT

Project Advisor	MR. SAEED IQBAL
Status	Complete

762. GENERIC NUMBER PLATE DETECTION FOR PAKISTANI NUMBER PLATES

Project Advisor	MR. SAEED IQBAL
Status	Complete

763. MATH SCANNER

Project Advisor	MR. SHAFIQ UR RAHMAN
Status	Complete

764. LAPTOP REPAIRING THROUGH AR

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

765. EXTENSION OF GTA CONVERTER FOR BLIND AND MUTE PERSON

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

766. AR BASED SIMULATION OF ARDUINO

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

767. SMART SAFETY MONITORING SYSTEM

Project Advisor	MR. SUNEEL KUMAR
Status	Complete

768. LINK BUILDING AUTOMATION

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

769. HATE SPEECH DETECTOR FOR TWITTER

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

770. AUTOMATION OF NEWS GENERATION

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

771. AUTOMATIC RESUME RANKING

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

772. FARM GROCER

Project Advisor	MR. USMAN AKBAR
Status	Complete

773. PROJECT SHARING ARCHIVES

Project Advisor	MR. USMAN AKBAR
Status	Complete

774. PRODUCT RECOMMENDATION SYSTEM

Project Advisor	MR. WAQAR MUGHAL
Status	Complete

775. EFFORTLESS FULL SERVICE EVENTS

Project Advisor	MR. WAQAR MUGHAL
Status	Complete

776. IDENTIFICATION OF APPLE LEAF DISEASES USING DIGITAL IMAGE PROCESSING AND DEEP LEARNING

Project Advisor	MR. WAQAR MUGHAL
Status	Complete

777. VIRTUAL DRUMMING

Project Advisor	MR. WAQAR MUGHAL
Status	Complete

778. THE BIKE FIXER

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

779. FITBOOK: COMMUNITY BASED FITNESS

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

780. BOUNCE BEACH

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

781. EATING UP PURE

Project Advisor	MS. FARAH NAAZ
Status	Complete

782. SMS PROTECTION MODEL (SPM)

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	Complete

783. YOUTUBE INTELLECT

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	Complete

784. FIRE & SHOOTERS' THREAT DETECTOR

Project Advisor	MS. MAIDA KHAN
Status	Complete

785. VFAKE DETECTOR

Project Advisor	MS. MAIDA KHAN
Status	Complete

786. SLEEP/DROWSINESS DETECTION USING MACHINE LEARNING

Project Advisor	MS. MAIDA KHAN
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Status	Complete
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787. SMART SEWERAGE SYSTEM

Project Advisor	MS. MARIA ZAFAR
Status	Complete

788. UMEED

Project Advisor	MS. RUBAB JAVAID
Status	Complete

789. KARIGAR

Project Advisor	MS. RUBAB JAVAID
Status	Complete

790. PERSONAL HEALTHSPA

Project Advisor	MS. RUBAB JAVAID
Status	Complete

791. CAR CARE

Project Advisor	MS. SADAF BALOCH
Status	Complete

792. YOGA FIT DAILY

Project Advisor	MS. SADAF BALOCH
Status	Complete

793. FAKE NEWS ANALYSIS N TWITTER USING MACHINE LEARNING

Project Advisor	MS. SADAF BALOCH
Status	Complete

794. UCP TMS (TRANSPORT MANAGEMENT SYSTEM)

Project Advisor	MS. SADAF BALOCH
Status	Complete

Motivation: The prevailing transportation system has a lot of conventional flaws and we have the tendency of replacing this system by an application that can solve a lot of problems and provide ease in travelling to and from the university. **Problem statement:** Travelling by university's transport one must always keep an eye out for the bus to arrive, ending up reaching the arrival or departure point too soon or too late. Losing a belonging for good, no security measures of who is boarding the bus. Admin provides printed bus cards, calling and managing drivers, rushing everywhere in case any driver's place needs to be filled doing everything manually. **Approach:** The approach to overcome the problem, we decided to make a web application for the admin to carry out all the work done which they usually handle manually. A mobile application is made for the registered user who can keep track of their transport/ **Results:** A basic solution is provided by us to the university to handle all the transport our web and mobile application. Admin can easily manage all the users, drivers, buses even there routes etc. **Conclusions:** Our app is able to provide ease to the university students and staff, a user is able to look for certain routes they are comfortable with and book a seat in a bus for a semester, the algorithm in the app will not only allow them to do this but also track their bus. Voucher can be downloaded from the app. The admin can manage the buses and drivers, the app will allow them to introduce new buses and routes, deleting a route etc.

795. CLOUD BASED ENTRY TEST PREPARATOR

Project Advisor	MS. SADAF BALOCH
Status	Complete

796. MEDICS+

Project Advisor	MS. SAHER ZIA
Status	Complete

797. PAK FALCONS 1965

Project Advisor	MS. SHAISTA SIDDIQUE
Status	Complete

798. CHEST X-RAY ABNORMALITIES DETECTION

(S21)

Project Advisor	DR. ADNAN N QURESHI
Status	Completed

Chest X-ray is quite significant in diagnosing and treating many medical conditions and best practicing doctors faces difficulties to accurately identify abnormalities. Precise and accurate diagnosis of Chest X-ray abnormalities is crucial to treat diseases. Interpretation of Chest X-Ray is affected considerably as Chest X-Ray images has tissue structures that overlap or image resolution does not have proper contrast to differentiate lesions. Therefore, incorrect diagnosis may cause deaths of people. Our model shall aid doctors to find abnormalities that shall lead them to diagnose disease with fewer errors. Deep convolutional neural network (CNN) based models such as DenseNet, AlexNet, DarkCovidNet, UNet are used for the classification of Chest X-ray abnormalities.

799. PREDICTING AIR POLLUTION LEVEL

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Air pollution causes damage to crops, animals, forests, and bodies of water. It also contributes to the depletion of the ozone layer, which protects the Earth from the sun's UV rays. Another negative effect of air pollution is the formation of acid rain, which harms trees, soils, rivers, and wildlife. Air pollution is responsible for major harmful effects on human health, animal lives, natural ecosystems and the man-made environment. As detecting the levels of gases in air is a difficult task and require hardware and its management. Our project aims to build a model with the help of machine learning approaches which predict the levels of different gases in air and calculate the air quality index or air pollution level.

The areas of BSCS degree which we will be used in our project are:

- Have knowledge of machine learning and artificial intelligence
- Understanding of python language

The end product is a program which use GA-ROSELM algorithm and by the help of that algorithm we use to predict the air quality index (AQI).

800. MUSIC GENRE CLASSIFICATION

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Completed

The aim of this project is to organize user's music library by arranging songs according to their genre. The user will provide the application with a song and the application will analyze the song and predict its genre. The application will then place the song into the relevant genre named folder.

801. SUMMARIZATION OF CRICKET MATCH VIDEOS USING IMAGE AND SIGNAL PROCESSING

Project Advisor	DR. MUHAMMAD AMJAD IQBAL
Status	Completed

It is observed that people tend to watch cricket match highlights. Presently the highlights are mostly made manually. Manually this work takes more time and more labor cost. This application will perform this task of summarizing, trimming and making highlights of cricket events/matches automatically by first detection of key events using algorithms of signal processing and then filtering these key events by score-card detection and score comparison. After filtering the key events true events are obtained, which are later merged together in chronological order to from a video of cricket highlights. This application will also show total number of wickets, fours and sixes.

802. RAPID DEPLOYER

Project Advisor	DR. NAUMAN MAZHAR
Status	Completed

803. AUTONOMOUS RICE PLANter SIMULATION

Project Advisor	DR. SYED ATIF MEHDI
Status	Completed

We will design a simulation of autonomous rice planter. It will be the software version of the robot. This simulation will cover following functionalities of the robot which are field map navigation, path finding, taking turns, and to follow the straight trajectories. Our main focus will be straight trajectories. It has been done to drive a vehicle autonomously on solid dry surface but not in a paddy field. In a paddy field there are some complications which are yet to be implemented. Like the rice planter can slip due to mud from its trajectory. As a simple rice planter costs about 10 to 15 lakhs, to this heavy machine if we convert this to autonomous rice planter it will be very costly and much time consuming and we will face many problems while building it. As autonomous rice planter is a simulation so it will be developed without any cost or damage. While building it if we face any kind of complication or problems we can handle them in much less time. Once it is developed we can install this software version to a physical rice planter.

804. STOCK MARKET FORECASTING USING TIME SERIES ANALYSIS

Project Advisor	DR. SYED ATIF MEHDI
Status	Completed

Time series analysis and forecasting is a useful technique for identifying essential trends that can be helpful to make future decisions. One of the most challenging issues in the modern economy is making financial judgments under numerous sorts of economic policies and reforms. High volatility shifts in instability patterns are common on the Pakistan Stock Exchange (PSE). When it comes to Monopoly and stock market predictions, there are numerous aspects to consider. We started with a static website, then moved to a dynamic web application, but the data was still stored statically. Now, we've moved to a full Mern Stack application that scrapes the data on the runtime and displays it to the user. The user can download the data as a csv file to check the historical data, and the user can also see a candlestick chart to help him understand the stock's trend. The numerous models used in stock market forecasting provided have all been classified in terms of data preparation, forecasting methodology, performance evaluation, and performance measure. However, in order to attain high forecasting accuracy, these discussed models have not been sufficiently discussed in data preparation in order to overcome the issues of randomness, uncertainty, and stock price volatility. We started by attempting to anticipate only the Pakistan Stock Exchange (PSE), but now we're aiming to predict overseas stocks as well, based on our data collection and many models. The Arima model, the long-short term memory model (LSTM), the linear regression and a few others were observed. The long-short-term model (LSTM) and the hidden Markov model (hmm) results are encouraging.. We chose the long-short term model (LSTM) and ARIMA because their root mean square error (RMSE) is lower than others.

805. SELF-DRIVE CAR SIMULATION

Project Advisor	DR. SYED ATIF MEHDI
Status	Completed

A report in this regard by WHO shows that as a result of road traffic crashes, approximately 1.35 million people die each year therefore world is entering towards the new era of development of autonomous car that can drive people from origin to destination without humans' interventions. This will also result into safe and comfortable commute for the passengers. In Pakistan most of the car

follows mechanical system where the simulated car will be operated by using robot operating system ROS or Scripting and simulated data from sensor system will be process in ROS or with C# Unity Script and action will be taken in simulated environment.

806. DIGITAL TANGA RACE

Project Advisor	MR. ASIM RAZA
Status	Completed

This is a game based project named Digital Tanga Race. Now a days, our community is neglecting and forgetting the culture environment, games and other activities. Our project seeks that we can use the current game - Tanga Race - for young generations and the tourists' attractions using techniques of 3D game development. The proposed game consists of two modes per se, i.e. user-based (user's input) and AI based (player using AI) individually. Meanwhile, a mixed mode will consist of two players, i.e. first, user-based vs. the AI-based player.

807. SURVIVAL OF THE FITTEST

Project Advisor	MR. ASIM RAZA
Status	Completed

"Survival of the fittest" is the name of our gaming project. As the name suggests both mental and physical aspects will be encountered in the game. In order to win the player must be physically and mentally strong. In order to be physically and mentally strong user will gather different fruits that will improve their skills. The user must survive and look for clues that will help him to leave the creepy mansion.

It is a gaming project focused on Android mobiles. It will be set in a realistic 3D environment with a dark theme like a creepy old Mansion. Our character can Explore every corner and can move freely on map. A game's difficulty increases as the player moves from one level to the other. Compared to the previous one, the next level will be more challenging, with more enemies and more difficult tasks.

We will be focusing on the user experience and graphics. The development will be done in four main phases which will be consisting of all the development and testing phases. Major software like unity, visual studio and Photoshop will be used to create character, assets and levels in the game.

808. IELECTION SYSTEM

Project Advisor	MR. AWAIS M. LODHI
Status	Completed

In current election system every year it is being reported repeatedly that the election is not fair the votes are being replaced, there are error in counting and many votes gets rejected. Our system will provide solution for these specific problem by making the vote auditable.

The question this problem arise in every election is "Was this election fair?"

We are trying to solve this question by adding proper security while maintain the user anonymity and making the votes auditable. Our system will be verifiable by physical and software means. Each result

can be back checked and election commission can recount and if someone ask to audit the election it can be done by ease.

- **Anonymity:**

The anonymity of a voter is a major concern in any kind of election system. If the anonymity of a user gets disclosed somehow the election will not be considered as clean. The user may get pressurized by some parties to vote for them and if the vote is not anonymous the voter will have no choose other than voting for that specific part.

- **Auditability:**

In our country almost in every election the opposition party claims that election is not fair and it should be re-conducted. This is because there is no Auditability in our current system else the Election Commission of Pakistan can audit the election to reject/approve their claims.

- **Countable:**

The counting issue is a major problem in our current election system. The votes are counted manually and there are huge chances that there may be error in counting which will be consider as human error. The anonymity of voter is also questionable in our current voting system.

809. EASY MEDICINE

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

We want to develop an android mobile application where patient can easily find required medicine. This application will provide an online platform where patient can just simply upload the doctor's advised medicine names with quantity and system will generate a request message to medical stores to check the availability after finding availability of medicine. A patient can also upload the picture of the medicine prescription and it will be visible to the nearest pharmacy or the pharmacy which accept the request of the patient and the order will be prepared accordingly. System will check the nearest medical-store which have required medicine then generate invoice and responds to customer to final the order. If costumer will proceed the order, system will finalize the order and book a rider automatically to deliver medicine on the customer location. User can pay the payment by two ways; one is cash on delivery and second is through card. Moreover, this app will also be available at doctor clinic so that he can add patient prescription. More in this app there will be history of the patient as the patient is new register or he is an old user. To attract the more customer, the patient will get a discount if he places more item than often. The Medicine with same quality and same name will be hand over the captain to deliver it to the patient.

810. HOTEL RESERVATION CHATBOT

Project Advisor	MR. HAMAD UL QUDOOS
Status	Completed

Hotel Reservation Chatbot will be a Mobile application that will reserve Hotel. This will provide user ease to find and reserve desirable Hotels according to their requirements like price range, area and location etc. People are too busy in their work that they do not have time to check quality and reviews about the hotels. User can simply tell the app that you want a room in five-star hotels with rating more than four. So, it will reserve hotel room/s. This will be a React-Native based Application that connect the hotel management and it will reserve a room for the user of the App. User of the Application can

do tasks related to the Hotel. The application can also show recommendation of the Hotels. This App will provide an easy-to-understand and user-friendly Interface for the user.

811. MOVIES POSTER CLASSIFICATION

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

As the scale of the film industry grows, the demand for well-established movie databases is also growing. The genre of a movie supplies information on its overall content and has multiple values. Therefore, it should be well classified utilizing the characteristics of movies, without omissions in the database. In this study, we extract the optimal information and characteristics from movie posters to aid the classification of movies into genres and propose the use of a Gram layer in a convolutional neural network (CNN). The Gram layer first extracts style features by applying the Gram matrix to produce a feature map of a poster image. Using this as a style weight, the existing feature map is merged with style information to perform the genre classification task.

812. SMART AND MODERNIZED ADVERTISEMENT

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

People use various methods to advertise their products or businesses on social media but in order to do that they have to put a lot of resources and time in order to achieve a certain number of marketing. In case of Facebook and Instagram advertisements you have to go through a hefty process to start your own marketing. You have to do an in-depth study on the target audience that makes it more complex. In this application Social Media Marketers can sign up on the application as agents whereas people who want to advertise their businesses can sign up as clients also it'll be cheap. The transactions of the clients and the promoter will be secured by banking modules and spam filters will be added to assure hate speech and explicit content.

813. DIGITAL ESTATES

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

814. CROPS HEALTH AND READINESS ESTIMATION

Project Advisor	MR. IRFAN ANJUM
Status	Completed

Crop diseases are the foremost tribulations in loss of agricultural department. Although, Pakistan is an agricultural country; we import various crops from different countries in order to fulfil our demands. To detect diseases and take proper actions is the major chore. Basically, symptoms of such diseases appear on the stem or leaves. In most crops, main cause of such diseases are several viruses. In Pakistan, this process is done manually but if technology is used in this field, we can generate sufficient revenue.

815. DISCOVERY ROVER

Project Advisor	MR. IRFAN ANJUM
Status	Completed

816. AIR CANVAS WRITING SYSTEM

Project Advisor	MR. IRFAN ANJUM
Status	Completed

As now a day's virtual teaching is common in educational system and all the old technology is replaced with new one for example now the old attendance register system is replaced with digital one so in virtual teaching, we are trying to write anything like White/Black board without use of actual board. Our main goal is to design Air canvas system which helps to draw and write anything on screen just by waving your finger fitted with colorful pointer or a simple colored cap. This will help the teacher to easily explain the topic in better way as he uses this system like a board and describe everything in better way. And this project also helps mute people as in our daily life mute people work in different stations where they try to convey their message to their assistant or colleague so if the next person does not know the specific sign language of mute person so he does not understand what the mute person is saying so this project provides the mute person ability to describe his word in an easy way.

817. HELPING THE TRAUMATIZED KIDS

Project Advisor	MR. M. BILAL KHAN
Status	Completed

People of different age groups suffer from some sort of Mood swings leading to trauma; there might be several reasons of their occurrence. We are focusing at the age group of 11 to 13 as this age group must be cured specially, these years are considered to be life changing years. Some students between the ages of 11-13 go through a certain mood swing even with access to education many children are getting hyper and are unable focus on learning due to the multiple mood swings whether it be due to

financial issues, emotional abuse, parental loss, homelessness, or any other hardships that they have suffered. We aim to identify such kids by conducting research and meeting the people involved in the therapies. We will meet the kids living in shelter homes etc. and will conduct their interviews. We can then discuss it with a professional to understand the mood swing the kid is facing at that time. These mood swings can include a variety of responses, such as Lack of impulse control, intense emotional upset, anxiety, behavioral changes, difficulties with self-regulation, attention and academic difficulties, nightmares and difficulty in sleeping and eating. A mood swing can be converted into a traumatic condition if are not able to take care of them at early stage. Natural disasters and wars play a major part in the development of the traumatic conditions, apart from that other factor are also the key factors, for example, family issues, accidents, illness, or the recent pandemic Covid-19. We will develop an app after this research which will help to reduce the Traumatic reactions by using pre-existing available therapies Introduction.

818. COVID-19 TRACER APP

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

COVID-19 has as of now accomplished the age of a long time since its inception into the world in the world and still it is not even close to its downfall. It has impacted all areas of the planet and took countless lives, put the globe in menacing disorder. The most serious issue is that it spreads. Spreading of COVID-19 has adjusted the human's social experience particularly one's portability. Two conspicuous methodologies have been taken to kill the COVID-19 infection or control its spread which are creating vaccines or utilizing social protocols individually. Numerous vaccines have been researched over, only few of them have been developed so far that generally works by embedding antibodies against the infection's cells to battle them in the body which body in any case creates at a lot more slow rate. At the point when enough number of individuals gets inoculated, many bodies become vaccinated against the infection subsequently leaving the infection inadequate. In any case, vaccines are losing their viability as COVID-19 is changing and new variations are being the reason for fast expansion in the instances of COVID-19 once more. A few norms of strategies for socializing have been additionally placed in spots to prevent individuals from collaborating with each and adequately decreases the spread rate. Nonetheless, this is troublesome methodology to follow as individuals are requesting their social portability. One approach will be to use digital contact tracing. It is digital method to tell civilians of infected spaces of COVID-19 patients so they can adopt pre-emptive and dynamic strategy to secure and disconnect themselves.

819. ONLINE MARKETING MOBILE APPLICATION STORE WITH AUGMENTED REALITY

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

Our project is about ecommerce application with augmented reality. The problems we faced and still facing while developing this application were many. The most common problem was is the database for the application. We faced many problems with the database. It was not linking the application but we are still working on it and it will be fixed in the future. Next problem we faced was that how to access the AR models from the cloud server because we cannot save all the models in the application. We did not have any problems while making AR models. After solving most of these problems we

learned many functionalities about flutter and firebase database because we are using firebase. We learned how to save models and request them from cloud and learned how to convert a simple 3D model into augmented reality.

820. AUGMENTED REALITY BASED RESTAURANT MENU

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

In today's day and age, just running a "good restaurant" is not sufficient enough. Customers have gotten smarter and prefer to see the food before believing it is good enough to be ordered. The visual composition of food on a plate is the primary part that decides the human comprehension of adoration and capacity to pay. Our sense of sight affects desires and perceived enjoyment of food.

Nowadays, as the customers wait patiently for their meal, the visual depiction may be appreciated as a means to keep clients entertained/distracted. Some customers may find it difficult to order if their knowledge about the dish or language is limited. Others ought to neglect to choose a meal that doesn't affect their wellness, confidence, health, or morals. Any other issues are less likely to arise when visually preparing a customer before buying.

We aim to provide an application to the users where they will view the food items in Augmented Reality (AR). They can also view the health benefits, ingredients they are allergic to such as peanuts, eggs, chocolate, etc., main ingredients, and reviews from other people. Users can also order food directly from the application, which would reach their tables. An augmented reality-based restaurant menu would provide easy access to essential information about dishes to improve the food selection process for customers and help the restaurant industry bring value to customers by creating realistic representations of dishes before they place an order.

821. AUTOMATED ONLINE BOLT MART

Project Advisor	MR. MOHSIN SAMI
Status	Completed

The project proposed is an online shopping mart. The problem nowadays is that due to the pandemic, people avoid going outside because of the threat being caught in virus and also due to lockdown most shops close prior to the time a working person gets free. We are suggesting such an environment where the user can have a real-life market experience. By real life meaning that things that are bought online have a fixed rate, we are offering the user to ask for discounts on a certain product according to the user's price range. The user negotiates on the price with the chat-bot that we are going to include for the ease of the user. Our main goal is to make an online mart where the user can buy products minding his price range, not getting out of his comfort zone and finalizing a trustworthy deal.

End project will be a website which will work like an online shopping mart. The user will visit the website. Search for certain products. If a product is of user's liking go to the chat-bot. If the user wants to ask for discounts, then he can chat with the chatbot and if the user does not want to ask, he can buy the product directly.

822. HARVEST AND CROP PREDICTION DE BANANA

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Bananas are one among the world's most vital fruit crops in terms of production volume and trade. Smallholder farmers, representing 85% of the world's farms. AI with deep learning models which help to spot plant harvest by the plant's appearance and visual symptoms that mimic human behavior should be considered. Deep transfer learning generates a fresh framework for digital image processing and predictive analytics, with greater accuracy and has huge potential in crop detection and its harvest. the target of this study was to use state-of-the-art deep learning techniques for the detection of visible banana about their harvest prediction and their count. Our system is going to be ready to use within the farming of banana. In this, they're going to simply add the image and system will process and provides the count and tell if they're ready for harvest or not. Our main objective of this project is to provide the farmers of the banana plants a helpful system that can be used to predict the number of bananas on the plant. The system will also be capable of predicting the harvest of the banana plant whether it is ready to harvest or not. Machine Learning will be carried out to assist the farmers to check the bananas and to predict the harvest of the plant.

823. CONFRONTO

Project Advisor	MR. MOHSIN SAMI
Status	Completed

824. TOUR TO-GATHER

Project Advisor	MR. MOHSIN SAMI
Status	Completed

The name of this project 'Tour To-gather' defines two purposes. First, to travel together and second is to travel to gather. The motivation in developing this project is to bring people together. Many people want to go on trips but they need to deal with many factors. First, they need to find if someone is willing to go with them, else they will have to go alone. Second thing is that it is sometimes quite difficult for a person to bear all expenses of travelling and touring any places. Therefore, there is a need of a platform where a person can find other people who are willing to travel together and share all expenses related to it. A person will enter area he/she wants to visit. If any other person also selects same area, he/she will be notified. Both people can contact each other through a given chat box and plan their trip together. In addition, they can search for hotels, restaurants or staying places and select the one, which is suitable to them according to budget and other requirements. Now this will not only bring people together but also people from different places will get a chance to interact with each other. No one will need to travel alone and bear all expenses of travelling. People can share all kind of expenses such as travelling, staying or food expenses. This platform will help people to achieve their travelling ambitions instead of forfeiting it due to above given reasons. The name of this project 'Tour To-gather' defines two purposes. First, to travel together and second is to travel to gather. The motivation in developing this project is to bring people together. Many people want to go on trips but they need to deal with many factors. First, they need to find if someone is willing to go with them, else they will have to go alone. Second thing is that it is sometimes quite difficult for a person to bear all

expenses of travelling and touring any places. Therefore, there is a need of a platform where a person can find other people who are willing to travel together and share all expenses related to it. A person will enter area he/she wants to visit. If any other person also selects same area, he/she will be notified. Both people can contact each other through a given chat box and plan their trip together. In addition, they can search for hotels, restaurants or staying places and select the one, which is suitable to them according to budget and other requirements. Now this will not only bring people together but also people from different places will get a chance to interact with each other. No one will need to travel alone and bear all expenses of travelling. People can share all kind of expenses such as travelling, staying or food expenses. This platform will help people to achieve their travelling ambitions instead of forfeiting it due to above given reasons.

825. SERVICE STATION APPLICATION

Project Advisor	MR. MOHSIN SAMI
Status	Completed

We are living in an age where no one has time to waste in getting small things done which can be actually done through application or other alternatives. In our target market, there are several service stations but the problem is to actually connect vehicle owners and the service centers. If we go in detail then we came to know that due to non-availability of rank or feedback of a service station the staff does not do his job sincerely resulting in bad service or in worst case damage of a vehicle. In order to solve all the above issues stated we decided to develop an application using which the users will be able to have facilities of providing feedback, choose the service station with the most effective price and many more features. User interface of the application will be simple enough so that even a lay man could use it without any help. Application will provide features like weather forecast, estimated time, directions of the service stations, booking an appointment. Oil change recommendations for vehicles of permanent users will also be provided on the basis of history recorded.

826. LIFT ON YOUR WAY

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

Lift On Your Way is an application available for use to anyone, whether a user is traveling to any destination using their vehicle or a needy user needs to travel to any destination and also can order food. The logic behind this is that when someone is planning to travel to a destination, the User will post their traveling schedule and available seats in the car in the application. This schedule will be visible to anyone who is using the same application and if this schedule meets anyone's interest/requirements, they can contact that person through the application and confirm their ride, after the booking number of seats will be decreased one by one. In this app user can order food by set their location, date or time. The calculated price will be shown only to the owner of the car. He will decide the price which will be shown with the scheduled date and time. User authentication will be done by the state of art mechanism in this application. Notification will be given to the user before the scheduled date and time. This app will auto rate the user by viewing their reviews.

827. AUTONOMOUS TOWN PLANNING

Project Advisor	MR. REHAN ABBAS
Status	Completed

Town planning is not easy and is very time-consuming. It requires a lot of resources especially professionals to do the work. Expensive software is also being used to plan or construct the plan. So, our system which will make that planning possible in a sufficient amount of time with more than one outcome or result for the user. As the population has increased and more land is being consumed for residential living. Most of which is in the shape of societies/towns. As we know it can be a hustle planning or structuring a map for a society/Town. The main challenges are that first of all we need to learn new languages such as python and JavaScript which will be mostly used in our project. React.js will also be used in the project for frontend development and making our web application.

828. QURAN RECITATION TUTOR

Project Advisor	MR. REHAN ABBAS
Status	Completed

Our project is that it'll provide a platform to all the users to learn the recitation of Quran. To get started with learning the recitation of Quran everyone starts from Noorani Qaida. Our application will let user to learn the proper Qirat of each Arabic alphabet, this will help the user to form a proper foundation of Arabic. The problem came to our mind when we saw that many small children weren't able to get the education of Quran. This was because they didn't have the resources or there was no one to teach them. The problem has a big significant because as a Muslim we should know how to read Quran and for Namaz it is compulsory to have proper pronunciation. To achieve this task we are using the knowledge of machine learning. We will train our model with dataset that we have collected. By training the voice dataset we will try to achieve maximum accuracy.

829. STUDENTS COMPLAINT PORTAL

Project Advisor	MR. REHAN ABBAS
Status	Completed

We propose and machine learning, in which identifying by prioritizing complain will play a vital role we can recognize minor as well as major problems in universities that students are facing. And keeping in view to save the time of university department this web app will auto prioritize the complaint and provide estimated time to the student. This web app has a dashboard that shows all the complains to the admin which are resolved and not resolved every department admin will have its complain at one dashboard. Student can also delete or edit its complain. And will get an estimated time for that registered complain. And for proof he/she can add the proof in form of pictures. Our system helps students as well as admin to understand problems in university.

830. HEALTH ARENA

Project Advisor	MR. REHAN ABBAS
Status	Completed

One of the concerning problems in the society nowadays is that how difficult it is for people to keep track of their exercise, diet, calories intake and overall health. Due to reasons such as lack of measuring tools and self-perseverance to carry out the exercise consistently and not access to proper guidance. This may lead to some undesired consequences (obesity, heart disease), there is an urgent need to provide proper professional nutrition guidance in order to improve the inappropriate dietary and exercise frequency. Health Arena is a personalized step-by-step health guide accommodating everyone, from beginners to advanced fitness enthusiasts. It will play an assistant role in the users' daily life. This app will be able to assist users to practice consistent exercise routines as well as follow their dietary plan and stay on track towards their health goals. Through Health Arena users can consult with a professional nutritionist by taking an appointment. This App uses AI to calculate nutritional needs and generate personalized custom diet plans. It combines experienced nutritionists with the learning power of AI to analyze and understand the health needs of users. It would help improve standard of living and reduce diseases and death brought about by the lack of exercise and healthy diet. When deployed, it would greatly help users achieve their fitness and health goals.

831. COLD STORE MANAGEMENT SYSTEM

Project Advisor	MR. REHAN ABBAS
Status	Completed

In Pakistan there are a ton's of cold stockpiling proprietors and practically every one of them are utilizing paper to deal with their money, records, and records which isn't effective, and it's a significant troublesome undertaking to work out yearly benefit from all the paper records (Paper records implies the over all data concerning the number of clients have utilized our administrations this year, the amount they have paid, the number of clients installment is forthcoming as they can defer installments for a year too, it incorporates clients individual data too, for example, clients address, public id and so on), clients have an issue following free space for putting away their packs so we will give an easy to understand interface which will inform them as to whether there is free space, it will likewise take care of the issue of ascertaining precise benefit which is made toward the year's end, will tackle the issue of temperature check which is done consistently, presently u don't need to open the cooler and look in case it has the right temperature or not by means of your website page u can see what temperature do u have in the cooler and will likewise give an alarm message to the proprietor that the temperature is rising. Another issue is that the majority of the clients in this business are ranchers so some of them work based on the credit, they hold installments for a couple of months and following a couple of months they compensation the virus storekeepers so should plan a framework will track the client that the amount he has paid and how much installment is left of his side. We will be planning a website page giving the client the most agreeable interface, the site page will be planned utilizing HTML and CSS. We will be planning the two clients and proprietors interface that will give login admittance to the proprietors and without login admittance to the clients, they will actually want to see all the data by entering their CNIC number.

832. ABNORMALITY DETECTION IN LERA-LOWER EXTREMITY RADIOGRAPHS USING DEEP NEURAL NETWORKS

Project Advisor	MR. SAAD AZHAR SAEED
Status	Completed

Musculoskeletal abnormality is the most common disease of all ages worldwide. Abnormality detection in the musculoskeletal study is backbreaking as more than 1.7 billion people are affected by musculoskeletal condition (BMU, 2017). Hence if we want to create enough opportunity to treat a maximum number of patients, machine learning and deep learning can play a crucial role. CNN is an excellent deep learning method for image classification and other computer vision tasks. In this System we use python libraries like cv2, NumPy etc. and we are required a minimum of 16 GBs of ram and 6 GB of GPU. Common methods, we use deep neural networks for feature classification. In theSystem CNN classifiers cannot train directly because of the loss of image details from resizing at input layers. The X-rays images are preprocessed before they are classified and these images are preprocessed with demonising, edge detection and histogram equalization and CLAHE. This study investigates new model architectures and deep transfer learning to improve the performance in detecting abnormalities of lower extremities while training with limited data. DenseNet-169, and AlexNet deep learning models were implemented and evaluated on the LERA, a large public dataset of musculoskeletal radiographs. These architectures were selected because of their high recognition accuracy in a benchmark study. The DenseNet-169and AlexNet models, employing deep transfer learning to optimize training on limited data, overall result of AlexNet is 0.92 and Dense-Net-169 is 0.874.

833. LEUKEMIA DETECTION AND CLASSIFICATION IN BLOOD SMEARS USING DEEP LEARNING

Project Advisor	MR. SAAD AZHAR SAEED
Status	Completed

Leukemia is the cancer developed in blood forming tissues of the body mainly bone marrow and lymphatic system. It has two main types namely Acute and Chronic. These are further divided into two subtypes, Lymphoid and Myeloid. The diagnosis of leukemia is most commonly carried out using cytogenetic testing i.e., observing microscopic blood smears and bone marrow images. These manual testing methods take weeks to process and detect the cancer. Multiple machine learning techniques such as k-nearest neighbor, naïve Bayes, support vector machine, decision table are also used for comparatively faster diagnosis than the traditionally used manual methods [1]. Still the result of such methods and the time they take for the diagnosis is not satisfactory. To make the overall process more efficient and precise, we will use Image Processing techniques (Image Segmentation, enhancement, and augmentation) to achieve the most out of the limited datasets available, and then CNN models which perform much better than traditional models by automatically extracting related features and classifying cancer in same and sometimes lesser time span will be used.

834. REAL-TIME TRANSLATOR

Project Advisor	MR. SAAD AZHAR SAEED
Status	Completed

Connecté (the real time translator) can help you translate in real time. Translation in real time or simultaneous translation will be done by using Google APIs to help people eliminate language barrier. Simultaneous translation, the task of translating content in real-time as it is produced, is an important tool for real-time understanding of different language. The main purpose of this project is to develop a

system which was able to do a real time translation during phone conversation between two callers who speak different languages.

835. FRAGILE WATERMARKING OF MEDICAL IMAGES

Project Advisor	MR. SAEED IQBAL
Status	Completed

These medical images are exchanged for number of reasons among which are teleconferences among clinicians, interdisciplinary exchange between clinicians and radiologists for consultative purposes or to discuss diagnostic and therapeutic measures for distant learning of medical personnel. However, these applications require more attention towards image protection (availability, confidentiality and reliability). To facilitate sharing and remote handling of medical images in a secure manner, watermarking guarantees attractive properties. It allows permanent association of image content with proofs of its reliability by modifying the image pixel values, independently of the image file format. Fragile watermarks are those that are easily destroyed by tampering or modifying the watermarked content, hence the absence of watermark to the previously watermarked content points to the conclusion that data have been tampered with, and thus are used for data authentication applications. One can use the fragile watermarking for authentication of medical images. First the image has been segmented that separates the lung parenchyma from the rest of the CT scan image, then three different types of watermarks are embedded in the host image by replacing the least significant bits (LSBs) of the cover segmented image. LSB is a simple fragile embedding technique with a high embedding capacity and small embedding distortions. The LSBs of the image are generally considered as noise inherent due to the image acquisition devices. So, these bits can be used for secret message embedding without greatly disturbing the image appearance. The scheme serves for both the purposes of medical image authentication and hiding electronic patient record (EPR). A medical image in the case of clinical outcome can be divided into two parts: the region of interest (ROI) where the diagnosis focuses and the region of non-interest (RONI), which is the remaining area. Usually, it is desirable to embed data outside of ROI to give better protection without compromising the diagnosis information

836. THE ELECTRICAL GURU THROUGH AUGMENTED REALITY

Project Advisor	MR. SUNEEL KUMAR
Status	Completed

We are making an AR application in which Electrician will be able to do his work easily. User must have android device having android version 6 or above. Our application contains seven problems. User need to have the same electronic device models on which our application will be working.

837. INTERACTIVE CLASSROOM USING AUGMENTED REALITY

Project Advisor	MR. SUNEEL KUMAR
Status	In Process of Completion

838. AI DOCTOR CHATBOT

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

Our project is to build NLP (Natural language processing) based AI Doctor ChatBot mobile application. Our ChatBot will interact with the user/patient and give them a realistic experience of chatting with a Medical Professional. The ChatBot will communicate with the user/patient and ask them about their symptoms. The user/patient can tell the Bot their symptoms in natural language. When the user/patient entered the symptoms the Bot will ask some questions related to those symptoms. After that Bot will diagnose the disease based on symptoms and answers of the questions entered by the user/patient. And then Bot will give the medical advice and domain specialist consultant of the diagnosed disease. If the disease is not related to the field of Bot then it will suggest the domain specialist consultant to the user/patient. Our ChatBot has also the feature of Autocompletion. Our ChatBot will diagnose minimum three diseases to maximum six diseases which are common diseases in people like Diabetes, Covid-19, common cold\flu\fever, Malaria, Dengue, pneumonia. For building our NLP (Natural language processing) based AI Doctor ChatBot, framework we are using is <https://rasa.com/>. Technique of ML and NLP is Recurrent Neural Network (RNN). For App development we will use the React native.

839. HATETREND

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

Hate Speech is defined as a speech which expresses hate or encourages violence towards a person or group based on something such as race, religion, sex, or sexual orientation. In social media platforms like Twitter where millions of tweets are tweeted each hour. If hate content is not blocked at initial stages, then it can spread very quickly. Due to high stream of traffic, it is not possible to detect hate content manually, so this task is done with the help of machine learning models. We are making a website which tells the number of tweets in English, Urdu and Roman Urdu. Our website will then classify them into three layers (hate speech, religion, racism and other) and tells the number. We are training our models for each layers. Dataset is available for Roman Urdu but we will further Enhance the dataset to 10000, moreover we don't know the policy on which it is labelled so currently we can't say that whether we can use this dataset or not. For Urdu, as per our current knowledge there is no dataset available publicly. If we find any dataset publicly, we will use it otherwise we will annotate it manually. We will label our datasets according to the policy which twitter uses to identify hate content.

840. EASYSHOP

Project Advisor	MR. USMAN AKBAR
Status	Completed

We focus on small scale business and promote them by giving them many much features which would help them start and promote business. These people can't hire a developer or can create app to promote their store as like in large scale business. This app will also work in small cities where other applications and stores do not provide their services. Users would be able to use its many interesting features like buying and selling of products, creating own brand, creating catalogs and videos , promoting business and tracking orders and keeping records. Immediate Delivery is one of the most important feature what if you need a thing immediately just have to open the location and order from nearby store. There would be no commission and no middlemen. Covid-19 has confirmed that world has become a place of social distancing, cautions and uncertainty so many people are not allowed to go outside .Covid-19 has mostly effected small scale businesses it was compulsory for them to close the store which causes unemployment. Easy Shop is a cloud based mobile application where everyone who want to start up there business can open their own brand. Talking about the seller it can be anyone for example the store at the corner of your street. The seller will upload the products on our application for the customers. User will set the location where he is and search for the product what he needs, and our application would show the stores with the specific distances so the customer can order what he needs and this can leads towards immediate Delivery as well, This is a feature lacking in other stores so we don't have to wait for Along for our order. Our app would have Multiple Languages as well to make it more understandable by the People who have small-scale businesses because everyone can't understand English.

841. AUTO MUSIC GENERATOR USING FACIAL EXPRESSION

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

We are fostering a versatile application that plans to utilize Artificial Intelligence and Machine Learning to carry out creating music with the assistance of facial acknowledgment. In this venture we will prepare a model trained on a dataset of tones from instruments like Piano. The application will use the camera from the Smart phone to distinguish the presence of the client and guarantee the liveness of the video feed. Assessment of the expressions and emotions the application will create music at run time. We believe a multi-channel Convolutional Neural Network (CNN) is a way better way to deal with distinguish designs like these since it gives a worldwide normal layer. Each time the application is dispatched new music will be generated to guarantee uniqueness and will be played on the music player inside the application. The unique aspect of this project that it utilizes facial expression and evaluation to generate the music. For instance, when the user is in front of the camera it will first verify if the subject is live or not. Then, it will utilize machine learning algorithms to distinguish the facial expression. If the user is smiling, then that implies that the user is in a joyous or a pleasant mood. Using this data from the live feed the algorithm will get the input of mood, which will generate music from a model trained on a piano tones dataset to create new and unique tunes. These tunes will be played in the music player. Also we are ensuring that the data is not being collected for malicious or personal intents through our application, this is being done to maintain security and integrity of the application. The video feed will not be recorded for security purposes. It will ask for the users consent to use the camera and during the live feed no recording will take place. Also the user can replay the music generated by the application using the music player.

842. TOUR HUB PAKISTAN

Project Advisor	MS. AYESHA ZAHEER
Status	Completed

In this project we try to develop a web application consisting of tour booking and add tours by different companies under a single platform. As we know a number of companies are organizing different tours all over Pakistan, but there is no single platform where user can easily compare all tour companies and chose best for them. It's kind of a platform where all famous tour companies register there self and provide these services. It's seeming very tiresome and exhausted for anyone to go on social media apps and check the schedule of different companies. By viewing all tour providing by different companies on this platform user can easily compare and contact different companies to book their best tour. The focus of this application is to save time for user and promote tourism in our country.

843. GAME PLAN

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

844. RATE-IT (MAKE LIFE EASIER)

Project Advisor	MS. AYESHA ZAHEER
Status	Completed

Our system will solve the problem of deciding from where we can buy any product or to spend money on anything by providing the ratings and reviews. Our system will ensure to provide the best and worst reviews and ratings. It enables buyer to choose the best shop or brand for any product which they want to buy according to their ratings and reviews. Many same products sold at different stores with different ratings and reviews which are available at different social media platform like Facebook and Instagram, etc. People don't have time to go to these platforms and check their ratings because it is little hectic to check out different pages. Our system will solve this problem by providing different reviews and rating on single platform. In this project we will cover different food restaurants, electronic shops, medical shops and different Pakistani makeup brands. We will gather ratings and reviews from different social media platforms like Facebook, Instagram, and LinkedIn etc. through scraping. We will also categorize these reviews in different categories like best, normal and worst by analyzing the reviews. Machine learning algorithm will be applied for these analysis. We will also provide our own rating in future. We will gather these ratings and reviews from those people who have bought something from these shops and brands.

845. ONLINE FOOD ORDERING PORTAL (OFOP)

Project Advisor	MS. FARAH NAAZ
Status	Completed

Innovation is pacing our lives according to our basic needs and allowing us to maintain a degree of comfort. This behavior has long been used to demonstrate that people are quick to integrate creativity into their lives. In this day and age, everything is automated and online there are certain online ordering systems that accept orders online and provide home delivery but Online Food Ordering Portal (OFOP) is a mobile base application which can be used by common user, patients and senior citizens. Numerous patients do not structure food on the grounds that the food does not address health issues. Consequently, an application is needed to give food to patients and senior citizens at doorstep. Online Food Ordering Portal (OFOP) brings the world's ideal and outstanding supper from the eateries to your entrance. It offers very good conveyance profit with nice quality. purchasers can organize sustenance from their adjacent eateries merely in an exceedingly moment.

846. SURVEILLANCE AND ATTENDANCE SYSTEM BY USING FACIAL RECOGNITION

Project Advisor	MS. FARAH NAAZ / MS. MARIA ZAFAR
Status	Completed

847. ZULUM

Project Advisor	MS. JAVARIA ARSHAD
Status	Completed

Everyone is familiar with Santa Clause also known as Saint Nicolas but most of the people do not know about Krampus. According to folklore, Krampus purportedly shows up in towns the night of December 5th, known as Krampusnacht, or Krampus Night. Merry—or not-so-merry—Krampus! We want to tell and aware the kids and adults about the story of Krampus because everyone knows about “Santa Claus” but they don’t know about the Christmas Devil who punishes naughty children. The Alpine legend is the original bad Santa. Krampus, in contrast, would swat “wicked” children, stuff them in a sack, and take them away to his lair.

848. ALZHEIMER PATIENT SUPPORT

Project Advisor	MS. MARIA ZAFAR
Status	Completed

Alzheimer is one of the most advanced forms of dementia which has been one of the most common illnesses in today's world. It slowly destroys the thinking ability of an individual in the sense that the individual loses the ability to think or perform the daily life chores, and stops living the normal lifestyle. The treatment to this specific illness is as complex as the illness itself, and is usually very costly. As a solution to assist caretakers; our product targets the main issues which have to be dealt with, which cover food, medication, sleep, and tracker. Alzheimer patient support is a hardware-software solution-based product which is a cost-effective solution to the illness of Alzheimer which cannot be fully treated but can be slowed down with its progress among any individual who is diagnosed with it. We will be using sensors (pressure and motion) to generate signals using our hardware devices which include smart medication box, smart food box, wearable device which will make sure that the individual who is diagnosed with Alzheimer has a proper diet and medication intake, along with that whether the individual has been able to have a normal sleep pattern and the live location of the individual will also be noted all the time. All of these details will be noted through forms of graphical representation in our software solution which is the mobile application. The device and mobile application both will be controlled by the care-taker of that particular patient and these records will be saved in the database of the application through which our product will give a record of the conditions and progress of the patient so that the care-taker and the medical officers both will be able to comprehend the condition process of that individual. Thus, Alzheimer patient support as a whole will be a cost effective solution to this real life problem and will enable the patients to get back to their normal lifestyle of life and feel less like a patient.

849. AtYourDoorstep.pk APP

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Completed

As the user has to download different apps to avail different types of services which ever user can't afford. As downloading more apps results storage consumption and downloading more application makes the system very slow furthermore in current systems there is not an option related to user required services where user can request for new services to be added in the application. In current applications there is a fixed price feature or some time application provides sale on certain items on certain occasions but customers cannot bargain with service providers. Users will get the home and outside services in one touch. Also, they can add a service which is not available at that time. As well as many users can start giving their services through a platform. Because of this many people will get jobs. Also, this application will reduce the unemployment rate.

850. VEHICLE PARKING MANAGEMENT SYSTEM

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Completed

Traditional parking systems have failed when it comes to the parking and security of the vehicle. To overcome the parking problems a system has been developed which ensures the vehicle's security and helps to manage the parking space efficiently. Moreover, security of the parking space is ensured by a verification system through which cars get verified and then allowed to enter or leave. In this way vehicle's as well as parking areas get secured and chances of human errors reduces to acceptable levels.

851. BIRDS' PLANET

Project Advisor	MS. RUBAB JAVAID
Status	Completed

This application is basically for parrot species. It connects human with different parrots and provide user-friendly platform. It makes it easier for any person to find the desired bird which they want to buy and want to know about various things about birds if the person is interested to know about some bird he can just take a photo and recognize which bird species this parrot belongs from. It will provide a very user friendly and helpful interface for everyone for bird's detection and knowledge experience. The dataset that we have collected is of 2000 pictures of all the birds together from which our system has recognized 1500 pictures.

852. READ AND SHARE

Project Advisor	MS. RUBAB JAVAID
Status	Completed

Book reading is one of the major acts in institutional education and even self-learning, people read books for different purposes like learning about something or reading different novels just out of habit. Significance of book reading is undeniable. There is a substantial portion of students who want to read books or those who need some books and those books are exceedingly rare, very costly, and difficult to buy a new one. The readers need to have a solution to buy their required books in affordable prices. Our project focuses on searching and borrowing books for reading. Like there are many students those cannot afford the expensive books and then there are students those are willing to donate or sell the books on reasonable prices, the prices which are lower than the market price, so it will be useful for both who needs books and for those who wants to sell or donate the books. There will be two types of users. One user will post a book that he or she has already read and is of no use, the second user will be able to search that book and request the book from the owner. Owner can also sell the book if he/she want they can post the book with the price and other users can buy it from them. The project is based on mobile application development. The end product will be an application which will have two users one will upload a book which he/she wants to sell or donate on the application and the other will have the access to purchase or borrow that book. And once the book is donated or it has been sold it will notify other users that this book is not available or it has been sold. It will keep update everyone who's using that application about available books and the books which are not available.

853. CARLA

Project Advisor	MS. SAHER ZIA
Status	Completed

Carla application will provide users to calculate pre-estimated fares on the basis of total distance algorithms. Carla is considered the best solution for these problems. If the route is long enough and there is room for a person in the car then the driver/car owner can add up a person from current the city if other passengers are comfortable. Carpooling is the old concept of traveling from one city to another. Carla can also help those people who take public transport to way back home from their offices etc. to

avoid the full cost of fuel, stress, tolls taxes, and high fares. This application allows user to give reviews. There will city-wise categorization, the user will select his desired city and timing. Overall, a user-friendly application providing personal ease with less fare.

854. A 32-BIT RECONFIGURABLE MICROCONTROLLER (F21)

Project Advisor	DR. ADNAN GHAFOOR
Status	Completed

Microcontrollers are commonly used in embedded applications. The Existing Microcontrollers do not provide design, peripheral functions, and clock cycle reconfiguration. The number of resources and interfaces are fixed and cannot be changed due to limitations imposed by the underlying technology. This project aims to design a 32-bit reconfigurable RISC-based microcontroller that is equipped with all of the fundamental interfaces like RS232, SPI and GPIOS. This will be done using FPGAs which enables designers to change the number of I/O devices depending upon the need and offer comparatively huge performance parameters.

855. SEAMLESS ACCELERATOR

Project Advisor	DR. ADNAN GHAFOOR
Status	Completed

Distributed computing enables a wide range of applications, including image processing, which can be accelerated using distributed computing. Existing distributed frameworks require a programmer's intervention to make the algorithm run in parallel. However, we are proposing a framework where a programmer needs only to configure the distributed environment once. The framework contains a library and a desktop application that will run on nodes in a distributed environment. The library functions called by a programmer will distribute various chunks of images to the nodes participating in the distributed environment. After the series of operations are performed, the resultant chunks will be collected to form the final resultant image.

856. MULTIPLE VOICE SEPARATION WITH SPEAKER DIARIZATION

Project Advisor	DR. ADNAN N QURESHI
Status	Completed

857. BASIC EDUCATION APP

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Completed

Abstract gives the summary of your project. You should focus on the problem description, significance of the problem, knowledge areas to be used and the results to be acquired. Make sure it does not turn out to be an introduction to the introduction / background but summarizes the whole project.

As the projects scope is more than we expected, designing, rigging, animation takes a lot of time to complete but we completed it in time as scheduled. We take help from tutorials of unity; links are mentioned in the last line. Completing all the interfaces and the documentation was so much tough to handle as we are still in learning phase but we have learned a lot and looking forward for scripting in the 3rd phase.

858. AN AUTONOMOUS DOVELPMENTAL COGNITIVE NEURAL NETWORK

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Developing cognition is difficult to achieve yet crucial for robots. Infants can gradually improve their cognition through parental guidance and self-exploration. However, conventional learning methods for robots often focus on a single modality and train a pre-defined model by large datasets in an offline way. It is a hierarchical autonomous cognitive architecture for robots to learn object concepts online by interacting with humans. Two pathways for audio-visual information are devised. Each pathway has three layers based on the self-organizing incremental neural networks. Our task is to improve this algorithm with a better one, i.e. TCA. Plasticity stability dilemma is one of the major problem that we aim to resolve through this algorithm. Visual features and names of objects are incrementally learned and self-organized in an unsupervised way in sample layers, respectively. Two symbol layers abstract the cluster results from the corresponding sample layer to form concise symbols and transmit them to an associative layer. An associative relationship between two modalities can be built in real time by binding activated visual and auditory symbols simultaneously in the associative layer. The learning procedure of TCA is divided into five parts namely (i) winner node selection, (ii) vigilance test, (iii) node learning, (iv) topology construction and (v) kernel bandwidth adaption. The experimental results on two objects datasets and a real task show that our architecture is efficient to learn and associate object view and name in an online way. What is more, the robot can autonomously improve its cognitive level by utilizing its own experience without enquiring with humans.

859. SELF-ORGANIZING INCREMENTAL NEURAL NETWORKS FOR CONTINUAL LEARNING

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

This project is based on the concept of continual learning. This system will add new data without disturbing previously learned knowledge. Social robots that interact with humans in their everyday lives are exposed to a dynamic and challenging environment. This dynamic environment provides continuous data streams that are potentially infinite and non-stationary. Hence, in such a complex environment, robots are required to continually acquire new knowledge and adapt to unpredictable changes over time by remembering aspects of past interactions with humans.

Our proposed model will be able to acquire new knowledge over time while preserving previously learned tasks without retraining an architecture from scratch is referred to as lifelong learning (LL).

We will develop our algorithm on the principles of ART (Adaptive Resonance Theory) so this is also a challenge for us to understand the implementation of ART (Adaptive Resonance Theory).

At the end, we make a system in which we know how to mitigate catastrophic forgetting, i.e., how to prevent the loss of previously learned knowledge when new tasks need to be solved. A key characteristic of such systems is the ability to acquire new information without compromising previously learned knowledge, i.e., without catastrophic forgetting.

860. MIND CONTROLLED ROBOTIC ARM

Project Advisor	DR. MUSHARRAF AHMAD HANIF
Status	Completed

861. AUTO BOT (EXTENSION OF ROBOFUN)

Project Advisor	DR. SYED ATIF MEHDI
Status	Completed

Our objective is to give basic knowledge of robotics to the students in an easy and interactive way. At school level there is no introduction to the field of robotics. Most of the students are unaware of what robotics is. From this project every student can interact with robotic car and learn about the basic sensors and functionalities that the robot can perform. Another aspect of our project is to utilize the use of mobile phones for studying purposes by having student control and interact with robot through an application.

862. DIGITAL TRAFFIC WARDEN

Project Advisor	DR. SYED ATIF MEHDI
Status	Completed

The big challenge for the regulators is to put in place an effective system to enforce citizens to follow traffic rules. If we talk about only one major city of our country like Lahore. According to the collected data from the city traffic police, there are a total of about 6.2 million vehicles and 4.2 million motorcycles are present only in Lahore. You can gauge the sheer number of vehicles in Lahore by comparing the number of vehicles in Lahore with the 19.6 million vehicles in the entire province of Punjab. This shows that Lahore has around 32% of vehicles in Punjab. But City Traffic Police Lahore with its 3000 traffic wardens and 215 Senior Traffic Wardens are covering the entire city. It is very difficult to increase the traffic personnel as it will increase the cost to the government. Traffic violations also cause traffic jams and cause of heavy traffic on road. Those people who obey traffic laws frustrate from these events. So, there should be a platform where people can do some things to those offenders. Installing cameras on all roads will cost a lot. If it is only a city in the county, then it can be done but to cover the whole country it's impossible, and if it is then too costly. Surveillance cameras also have maintenance costs and maintenance issues. We need the help of AI to resolve the challenge in all the Dimensions (human interference, cost, accuracy, data retrieval & punish the

violators). This solution will bring a lot of discipline among drivers to follow the traffic rules and obey them.

863. CREATING 3D MODELS USING 2D-IMAGES

Project Advisor	DR. SYED ATIF MEHDI
Status	Completed

864. SENTREND: TRENDING TOPICS ANALYZER FOR TWITTER

Project Advisor	DR. ZAFAR SAEED
Status	Completed

Sentrend is a web application that visualizes information to allow comprehensive insights into Twitter trends. Such visualization can lead to a deep understanding of public opinions and market trends, resulting in an immense advantage to make informed decisions for businesses and consumers alike. The application architecture developed uses ReactJS for the frontend, Django for the backend, and MongoDB for the database. It follows REST as its primary design principle and provides its service as a web API. The data analysis performed uses existing optimal algorithms for Sentiment Analysis and Topic Modeling. The gathered results are transformed into graphs, charts, select Tweets to extract insights.

865. AI BASED AUTOMATED FOOD RECOGNITION USING CNN FOR FITNESS APP

Project Advisor	MR. ATIF MEHMOOD
Status	Completed

Whole world is after fitness. It's all about working out hard and eating right. But systems are not perfect which makes achieving goal a bit difficult. Here we are a group of motivated three, present you the system which fills the gap of miscommunication of a trainee and a trainer. We are creatures of divine nature, but neglecting fitness. Let's overcome this issue together.

866. TWO WAY VERIFICATION OF ANY VIRTUAL DOCUMENT (HANDWRITTEN DIGIT AND SIGNATURE)

Project Advisor	MR. ATIF MEHMOOD
Status	Completed

The reliance of humans over machines has never been so high such that from object classification in photographs to adding sound to silent movies everything can be performed with the help of deep

learning and machine learning algorithms. Likewise, Handwritten text recognition is one of the significant areas of research and development with a streaming number of possibilities that could be attained. Handwriting recognition (HWR), also known as Handwritten Text Recognition (HTR), is the ability of a computer to receive and interpret intelligible handwritten input from sources such as paper documents, photographs, touch-screens and other devices. Signatures are widely used as a means of personal identification and verification. Many documents like bank cheques and legal transactions require signature verification. Signature-based verification of a large number of documents is a very difficult and time consuming task. Consequently, an explosive growth has been observed in biometric personal verification and authentication systems that are connected with quantifiable physical unique characteristics (finger prints, hand geometry, face, ear, iris scan, or DNA) or behavioral features (gait, voice etc.). As traditional identity verification methods such as tokens, passwords, pins etc suffer from some fatal flaws and are incapable to satisfy the security necessities

Our main objective is analysis of recognition accuracy for machine learning and deep learning algorithms. The CNN algorithm and LSTM, KNN and ANN classifiers in relation to real sets of handwritten numbers and Signature. To investigate algorithms influence of an image preliminary processing on recognition accuracy. To evaluate all the possibilities to use the considered algorithms for solving technical problems associated with the processing of handwritten digits and signature noisy images.

867. SEGMENTATION OF THE PANCREATIC CANCER

Project Advisor	MR. AWAIS M. LODHI
Status	In Process of Completion

868. PROPERTY TICKET

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

869. ONLINE SANITARY STORE

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

Mostly retailers buy sanitary products in bulk at factory rates and sales them on almost 50% profit. People only know the rates of retailers but our web application will help the retailer as well as the

customer to buy sanitary products on the same wholesale rate as provided to the retailer. This will help the local customer to buy on the wholesale rate. The retailer don't tell the wholesale price of the specific item but in our website the customer will know the original price and don't pay for extra price which a retailer asks to pay. The problem is that the retailer as well as customer needs to have a spare time to buy the sanitary products which is very problematic in some situations. The people living in rural areas needs to travel for hours to fulfill their needs.

870. IOT BASED INDUSTRIAL TRANSPORT SERVICES

Project Advisor	MR. HAMAD UL QUDOOS
Status	Completed

In this project, we propose a system for industrial goods transportation based on the Internet of Things. We will build a mobile application and a web portal, which will be encrypted with an encryption algorithm. Industrial manufacturers can use the app to hire their drivers whereas drivers can charge manufacturers according to weight. With the help of this app, the manufacturer can transfer and track his goods. Driver will measure the weight with the help of an IOT weight measuring device.

871. PR ADVISOR

Project Advisor	MR. HAMAD UL QUDOOS
Status	In Process of Completion

Definitely, a person wants to grow his new firm in the market, he would require a good advertisement of his firm. The major issue that comes in between is the connection with celebrities in order to hire them for marketing purposes. Generally, we make contact with certain merchants first and then they further schedule meetings with us to present our offer and which takes a lot of time and efforts to contact the celebrities. Also, there are certain other dealers between the firm and the celebrity then it is hard to explain the exact marketing work to the celebrity and so far so forth, the connection with that celebrity is weak. The signing of agreements takes time and the dealers related to certain firm and the celebrity keep their cut which makes the more consumption of amount of money. It is being noted that for this marketing technique, the way communicate with the celebrities is thought to best by sending them emails, which takes a lot of time to reply. A celebrity is never really free to reply emails at the same time and sometimes, they do not even read the mails. So, our application is going to deal with these kind of problems in making connections between the influencers and the one who is in need for marketing. By using our application, all food bloggers, tiktokers and youtubers can make money easily.

872. ALBERGO SUPERVISOR

Project Advisor	MR. HAMAD UL QUDOOS
Status	Completed

873. PLAYING ARENA BOOKING SYSTEM

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

We are developing a mobile as well as a web based application for the booking of futsal grounds as well as swimming pools available for the public. The problem they face is that there is no automated system to book these arenas. Therefore, we are introducing an application that helps them in this regard. Not only for the players but also for the owners of these grounds and pools so they can manage their daily bookings, cancellations etc. The website would be linked with the mobile application as anything that is changed in the mobile application or bookings that are made will be updated on the website as well. Many functionalities will be included in the application that will be specified by the user himself. Therefore, the hassle to call the arenas or physically go there to book the ground for a certain time period will be eliminated.

874. EASYSHOP (OBJECT DETECTION)

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

Efficient and accurate object detection has been an important topic in the advancement of computer vision systems. The project aims to incorporate state-of-the-art techniques for object detection to achieve accuracy with real-time performance. A major challenge in many of the object detection systems is the dependency on other computer vision techniques for helping the deep learning-based approach, which leads to slow and non-optimal performance. Computer vision consists of various aspects like image recognition, image generation, object detection. In this project, we are using highly accurate object detection algorithms and methods such as R-CNN, Fast-R-CNN, Faster-R-CNN, RetinaNet, and fast yet highly accurate ones like SSD and YOLO. Using these methods and algorithms, based on deep learning which is also based on machine learning requires lots of mathematical and deep learning frameworks understanding by using dependencies such as TensorFlow, OpenCV, imageAi, etc, we can detect every object in an image by the area object in a highlighted rectangular boxes and identify every object and assign its tag to the object. This also includes the accuracy of each method for identifying objects. In this project, we use a completely deep learning-based approach to solve the problem of object detection in an end-to-end fashion.

875. DOCUMENT PROCESSING FOR DATA EXTRACTION AND TRANSFORMATION

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

We are currently here living in 21st century which is also known as the modern century ever as the information technology and its practical applications are at their peak already. Many products and services are being invented or getting updates every time and on daily basis. The information technology and its practical applications are at their peak already. Many products and services are being invented or getting updates every time and on daily basis. Still there are some problems and areas where some applications can help humans to work out with the problems. For same kind of problem our group proposed an idea to help humans from a job which is nowadays think as focusing, demandable, and full attention job which is data entry. This job requires so much resources where time is the most important one. The organizations need to hire people who are required to do this job with continuous and full attention to enter data from different documents into data warehouses such as excel files, local databases, etc., which can be done manually by writing them manually or by local software. We produced solution that we will design a module which will require a single input in form of an image of a specified resolution from which that system will detect the type of document whether it is an invoice, a purchase order, etc., by using machine learning and NLP techniques and algorithms then will extract meaningful information from it according to the type of document e.g., in case of invoice it could be quantity, total price or client name etc. and will create a runtime query which will then be used to enter the extracted information into the required database. The ML techniques will help to detect type of document, to extract data from document with help of NLP techniques and to transform it in digitalize form too. After this extraction and transformation process of information, system will ask for confirmation of extracted information and then after confirming, create a runtime query which will upload the extracted information in the required places such as respective tables and columns in database.

876. SMART LEARNING WITH FUN

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

The attention has been diverted from traditional learning methodologies with the advancement of technology, accordingly, kids nowadays (school level students) spend more time on computers, mobile phones, and other gadgets as they look forward to the entertainment and recreational stuff; hence, compromising their academic progress. Therefore, keeping in mind the growing interest in social apps, we have developed an application to solve this problem; accordingly, the application will be providing entertainment as well as furnishing their academic and learning skills.

877. JAIB DEKH KE

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

The process of matching accounts statements at the end of the cycle to receive accurate statistics and findings /adding missing transactions eventually drives users away from the solution. Shifting to another device should not eradicate previous records and should be a synchronized process creating an aura of trust in the solution to move forward. Conclusions of an informal case study conducted amongst salaried comrade's concluded that they all used different budgeting app for tracking of their expenses and conforming their salary cycles into a budget whilst managing multiple accounts and cash

flow. We also learned that the people correlate to a goal-based appreciation theory relating to the concept of classical conditioning in human psychology hereby introducing a system that award the user points to reach a budgeting goal would better enhance the optimal usage of the application hereby better budgeting.

878. CLASSIFICATION OF LUNG CANCER THROUGH DEEP LEARNING

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

879. PLANIFICADOR WEB

Project Advisor	MR. IRFAN ANJUM
Status	Completed

A smart scheduler website that will find the optimal timetable according to the given requirements. It will also send a detailed reminder to everyone so that no one misses the exam. During the scheduling process, many constraints should be considered. Scheduling will be done in such a way that the students of the same course will not be able to sit together so that plagiarism can be avoided. Also, students won't be having 3 consecutive exams in a day. Students and teachers can easily see their duties and exams from the scheduled timetable.

880. PRO PRAM

Project Advisor	MR. IRFAN ANJUM
Status	Completed

A baby pram monitoring system is a way of monitoring how you can keep an eye on your child when you are not physically available through sensory and response systems. This program can be used in a variety of situations such as when you are in another room doing your homework, in the office and your child is with a baby sitter at your office etc. We are providing many sensors such as PIR sensor, cry detection sensor, ultrasonic sensor / IR sensor so, that we will be aware of the baby. Our pram will contain a camera above the baby, firstly the camera is OFF, when the PIR sensor and cry sensor have the signal then the camera will be ON, capture the baby's live video, and update the parents through the mobile application. We are also using microphone that will let us know about the baby's voice and also speakers to entertain the baby by the poems and talk with baby. We can control the pram remotely through Wi-Fi/ Bluetooth. We are using dc motors to move the pram forward, backward, left and right. Today because of the rapid advances in technology, everyone is busy in their lives and their works but this pram makes this so easy and provide many benefits to look their baby. The introduction of IOT

into real-world objects have solved this problem. Because of IOT, data sharing has been amplified. The sensors are used to get the real-time data and the user can know what the situation is whether he/she is present at the location or not.

881. LOCA.LY

Project Advisor	MR. IRFAN ANJUM
Status	Completed

Loca.ly is service providing platform which aims to provide the basic services at your doorstep. It helps to provide trusted and certified service providers with complete transparency of cost calculation. As the world is evolving rapidly, there is a need of time to be a basic home service providing platform available for people at just a single touch. Loca.ly aims to make people's life better with complete satisfaction of cost calculation of service, which were considered as very difficult task to calculate digitally. Loca.ly is the app for making the world a better place and to erase the people's one of the most common yet unsolved problem.

882. AI CAR CHASE GAME

Project Advisor	MR. IRFAN ANJUM
Status	Completed

The project is a game in which AI cars chase the player-controlled car in a city map. The AI cars will be trained in pathfinding and to chase the player using ML deep reinforced learning on the steer and acceleration of AI cars. A number of training strategies will be used to train the AI brains such as deep reinforced learning and imitation learning. Player can pick powers ups, lose health on collisions. The survival time determines the score.

883. TERROR

Project Advisor	MR. KAMRAN SHABBIR
Status	Completed

The project is a Battle Royale and Survival 3D PC third person shooter game. With the unique feature of the voice commands. Everyday Login portal for saving the player's information and daily rewards. Including multiplayer and single player first and third person mode as well. The one necessary feature that is about collectables and power ups of a player is also included in our game. The game will be played in the fantasy world around the fictional story line related to the modern world of Artificial Intelligence. Some major problem statements of the modern gamming era that we will be solving in this project will be:

- Due to the different specification of PCs the frame rate difference can cause effects in the game results that is the lower specification PCs tends to lose more because of the frame rate. We will be working to improve this problem so that there will be no effect on the result of the game.
- The same gameplay pattern will be replaced by the unique and interesting feature of voice command.
- There are many chances that while playing game the triggers or buttons of the machine don't work properly to overcome that issue the voice command feature is best one.

The knowledge areas to be used are:

- Game development
- 3d modelling
- 3d computer graphics
- Photoshop
- Programing (c#)
- Database
- Artificial intelligence
- Texturing

Our main objective will be to make an interesting 3D game with interesting and unique feature and interface

884. LANDSCAPE ARCHITECTURE AND ENVIRONMENT PLANNING USING AUGMENTED REALITY

Project Advisor	MR. KAMRAN SHABBIR
Status	Completed

Our Project will work on easing the landscape designing for customers using the AR technology. AR will provide the enhanced view of real-world setting generated through computer input. Maya and Unity are techniques and tools to be used. AR will be used to provide an overview of lawn/backyard on the app. The customer can place the 3D objects on his backyard/lawn to give their client a brand-new view of their hardscape, landscape that is true to scale and ready to explore in real-time from an angle.

885. DREAM IT

Project Advisor	MR. KAMRAN SHABBIR
Status	Completed

DREAM IT is an online residency finder system. This system will provide online best option of lodging. Our system will use google map API and take user current location and show all residencies nearest to his/her. User can choose any residency according to his/her needs, budget and specification. After choosing desired residency user can make an online or offline call. User can get a support panel for his/her betterment in getting optimal residency. After getting desire residency user can also book cook and maid through our system.

886. DRAGGER

Project Advisor	MR. M. BILAL KHAN
Status	Completed

The problem is that the person has to build the UI UX design from scratch. If not choosing the best infrastructure the application may crash in multiple cases. Also, if the design is not right, it can lead to problem between developer and client. It is also costly and takes times. We are developing a web builder to overcome this problem. The knowledge areas used to be is web application development Python (Django), php, core knowledge of JavaScript and database (MySQL). The result acquired at <S25BS005>

the end of this project is to enable the client/user to create a website design using drag and drop feature. It results to save cost, time and with using the best infrastructure.

887. CAR MODIFICATION SYSTEM (WEB BASED APPLICATION)

Project Advisor	MR. M. BILAL KHAN
Status	Completed

888. SENTIMENT ANALYSIS CHATBOT

Project Advisor	MR. M. BILAL KHAN
Status	Completed

889. DICENDO ANIMOS

Project Advisor	MR. M. BILAL KHAN
Status	Completed

This project will convert speech to animation. The significance of this project is that everyone nowadays is more fascinated by visual representation that is the easiest way to understand any problem or storyline. Our understanding depends on what we mostly see and in order to strengthen our understanding about anything we try to visualize in our minds. For children to adults everyone needs visual aids to understand something better.

It is a well-known fact that movies, books and songs are the most effective media to show people ideas, concepts, themes and information play an integral part in shaping our image, our perception of different things and events.

In the case of cinema, especially, many a time these are taken as Gospel truths and hence, despite being shown in the form of films, they become the yardstick to test against reality. In order to help ourselves we hope to create a program that can, through a given speech input, create a somewhat resembling small animation of the thing that we are trying to think of.

890. TRADZILLA

Project Advisor	MR. M. USMAN AFZAL
Status	In Process of Completion

In this application, we are going to implement barter system where people can exchange their goods for goods. People who have excessive goods can change with other person goods. They can simply exchange goods which is not more useful for them but others can use. Person can reach them according to requirement of trade. So, they can exchange their items by communicating each other. Our App will allow only Trade of goods with goods on basis of bidding. In case of price difference exchanger can do bid. They can also trade through a delivery service provider company i.e. cheetay.

891. ELECTRONIC LUDO

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

There are two ways of playing Ludo game one is playing simple Ludo board physically and the other way is playing online Ludo game. There are already many online games available on stores but if we talk about the real time game play like playing physical Ludo then there must be more than 1 player because in simple Ludo board a solitary player cannot play the game without any other player. So, we are going to resolve this problem in this project that a solitary player can play the game without any other player with AI player. Assuming an individual player need to play Ludo game physically however in case there could be no other individual player who play game with him so it is basically impossible to play Ludo physically or you need to play Ludo online with PC. Yet, in this Electronic Ludo a solitary player can play Ludo physically with PC as well as with different people.

892. SWIM BAG

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Our project Swim Bag is a multi-functional, Swim training platform that will allow swimmers to improve their game and reach their goals whether they are a swimmer, a triathlete, or someone starting out as a beginner. Moreover, it will create a proper communication barrier between the coaches and the athletes training under them. It'll also help in providing swimming plans and videos, which will help in mitigating loss of skills and fitness among swimmers. The FAQs session will track progress and will cover their basic knowledge and techniques of beginners and pros swimmers alike. The blog system will provide news updates, trial dates, competition dates and camp details.

893. ROAD SURFACE AND SIGN INDICATOR

Project Advisor	MR. MOHSIN SAMI
Status	Completed

894. CODEANDFLOW

Project Advisor	MR. MOHSIN SAMI
Status	Completed

As we know Some Students Find Flowchart difficult and some Find Coding difficult and it is difficult for them to convert a code into Flowchart and Flowchart into Code. Student also Find it difficult to collect authentic data from different sources in this process a lot of time is wasted Because of this they faced difficulties in their academic performance. To overcome all of these problems in this project we are going to design website for conversions of Flowchart into code and code into Flowchart with the availability of Lectures, Content, Quizzes and Assignment.

895. OFFERTA PERSONALIZZATA

Project Advisor	MR. MOHSIN SAMI
Status	Completed

896. DIABETIC RETINOPATHY DETECTION USING MACHINE LEARNING

Project Advisor	MR. MOHSIN SAMI
Status	Completed

In today's time; researchers, scientists and health workers are looking forward on advanced technologies that can help and speed-up the medical processes but are also budget friendly. Keeping all these factors in consideration we have come forward with an advanced technology of Deep Learning that will help in Diagnosis of Diabetic Retinopathy (DR). Diabetic retinopathy is a common complication of diabetes and major cause of vision impairment and blindness worldwide. It is a condition caused by diabetes that affects the retina damaging retinal blood vessels making them leaky or blocked. Abnormal blood vessels can grow from the retina, which can bleed or cause scarring of the retina and result in permanent vision impairment or blindness. Vision impairment most commonly occurs due to thickening in the central part of the retina (diabetic macular edema), which can lead to irreversible vision impairment. In present times, the diagnosis is done by subjective human evaluation that is slow, time-consuming and resulting in clinically hard monitoring of DR. With our automated approach, the process of diagnosing such a disease can be easier, flexible, fast and most importantly; budget friendly. Furthermore, it can prevent the loss of vision in up to 95% of cases by early detection, combined with appropriate treatment and management. DR is the manifestation of systemic disease, which affects up to 80% of all patients who have had diabetes for 10 years or more. Automated DR can be implemented using various algorithms like computer vision, machine learning/deep learning, and deep neural networks. But deep learning in general has achieved high validation accuracies. So, based on our research we will be using Deep Learning for our project and Python computer language along with some Image Processing techniques. Following are the different stages that we will go through to complete this project.

1. Input Image
2. Handcrafted Feature Extraction
3. Deep Learning Model (Training & Testing)
4. Integration of Model into Desktop Application

897. ARTIFICIAL INTELLIGENCE BASED SECURITY SYSTEM

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

Artificial Intelligence based Security System is a project which will use face detection and face recognition to identify a user and allow him to enter a particular place. This project will bring the innovation in our society. Usually, a person has to manually open the door or hire a person who will check whether a person is authorized or not. This application will help solving this problem. As it will detect a human face and if it recognizes that face, then it will decide whether to allow the person to pass or not. If the system will not be able to recognize the person, then it will send a notification to the mobile application and ask the user whether to unlock the door or not. If the user allows to unlock the door, then it will be unlocked instantly but if the user does not want to unlock, he can send a recorded voice message through mobile application which will be played to the person standing outside. This project comprises of a mobile application (IOS and Android), web application and some hardware tools. Mobile application will be used as the main UI and web application will be used for handling the backend. The main component of hardware is the Raspberry pie which will be setup as a computer and is connected with camera and lock.

898. DOCTORS INN

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

Covid-19 has increased health risks both for patients and doctors. This app allows an online medium for the both to contact directly without any physical contact unless necessary. This application will reduce panic for patients when they experience even the mildest of symptoms and provide them a wide range of solutions in form of professional help. We should have the knowledge of mobile application development with respect to react native platform and android studio.

899. EXAM CHEATING DETECTOR

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

Virtual Mouse is a software application used to perform mouse operations without using the mouse. Now-a-days world has introduced latest technologies in relevant fields so hand gestures (Virtual Mouse) is a new way to use the system/ control mouse without using the mouse. We can simply use the system by our hand gestures with the help of webcam. A user will perform simple mouse operations by showing hand in front of webcam. With those hand gestures the mouse cursor movement, single/double clicks, left/right clicks, zoom in/out operations can be done. The hand will be the region of interest will the background will be ignored as it will be considered as region of outside or unwanted region. Virtual mouse using hand gestures is the easier way to use the system or to interact with the system/machine.

900. AREA TRAFFIC CONTROL SYSTEM

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

901. DETECTION OF TOMATO PLANT DISEASES USING DEEP LEARNING

Project Advisor	MR. MUHAMMAD JUNAID ZAFFAR
Status	Completed

Plant diseases have always been a tricky problem in agricultural production and one of the main factors restricting the sustainable development of agriculture. Our software will be able to detect up to 3 diseases found in tomato plants. This project will be based on deep learning and will use deep learning model to accurately detect the diseases. We will also be using object detection model to detect the infected areas on the leaf. The datasets used in this project will be from the internet (Plant Village) and we will also be adding our own dataset. It will be divided into three sub-categories, training set, validation set and test set. We will be making mobile application, in which user can take picture of tomato plant leaf and our app will identify either the plant is healthy or have any disease in the case of disease it will also recommend its treatment. This proposed project model can efficiently identify up to 3 tomato diseases and the location of infected part on the leaf.

902. ROOM FOR MORE

Project Advisor	MR. MUHAMMAD NOMAN
Status	Completed

903. FLUFFY

Project Advisor	MR. MUSTAFA HASSAN
Status	Completed

Fluffy will allow the user to create the Front-End using the drag and drop feature. Users only need to design the Front-End in the framework that we provide which will be automatically converted to the code. A range of widgets, with the option of altering the properties, is provided to choose from. Users will have the option to add team members for parallel editing. One project will have more than one canvases, so users can make more than one screen in the same project.

904. SONICSYNC: THE LEGIT SOUND SYSTEM

Project Advisor	MR. NABEEL AHSAN
Status	Completed

The mobile application SonicSync is designed for individuals who want to listen to music synchronized. Using SonicSync, you can enjoy synchronized music across your house on all of your speakers via a single, simple-to-use interface. Synchronizing audio across mobile phones and other music players is the goal of this software. Using SonicSync, consumers will be able to listen to their music on any device that is linked to the same local network. To listen to music, this app may connect

to the internet through wifi. This solution, however, is dependent on the security settings of the network you're using. All Android smartphones will be turned into wireless multi-speaker audio systems and connected to the Controller Audio Source Device, which will play music simultaneously on all devices.

Our application will

1. Turn all Android Smartphones into a wireless multi-speaker audio system.
2. Connect additional devices as wireless speakers to Master Audio Source Device, and will play music on all devices at the same time synchronously.

To accomplish the desired result we need to know following languages

- Back-End
 - JAVA
- Front-End
 - XML
- The tools and environment that we need are
 - Android studio
 - Networking

905. TUTOR BOARD: INTERACTIVE LEARNING APPLICATION FOR STUDENTS

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Our application Tutor Board is an android based application to eliminate hardships that students face due to unclear concepts. With the help of our app, students will be able to arrange one to one session with the tutor for a nominal fee. The app will help the student to find good teachers online based on their ratings. It will give them an opportunity to ask questions and clear his concepts. It will also be beneficial for the teachers to make extra earnings. The app will provide features like audio call, texting, notes sharing, interactive white board, teacher rating, teacher charges (per hour) etc.

Our application will solve the following problems

- Lot of students registered in a single course. It is difficult for students to ask questions or share queries.
- Not all educational institutions have good virtual learning environment
- Students in remote areas of Pakistan have no access to teachers from reputed universities of the country.
- Income problem of school teachers who lost their jobs during pandemic.

To accomplish the desired result, we need to know following languages

- Kotlin
- XML
- JAVA

The tools that we need are

- Android studio

AWS (cloud computing service)

906. MIS-MATCH

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Mis-Match is an app used to find missing persons. This app uses photos to find the missing person through face recognition. If a person goes missing their relatives can upload their photo with clear facial features. On the other hand, if someone finds a missing person and cannot recognize who the missing person is, they can upload the found person's photo on our app. Our app will then check all photos in our database and if there is a facial match between lost and found photos, our app will automatically give a notification to both parties. This app will especially help people in finding their lost children because children have less knowledge of their home address, home contact, etc.

907. TURTLE BOT: SORTING ROBOTIC SYSTEM

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Pakistan is an under developing nation and therefore does not focus on the environmental issue as much as compared to other problems and when they do, it is going be too late. This is where our product plays its role as an automated waste management system based on computer vision and object detection. The knowledge area used in its topology are Machine Learning, cloud computing, Internet of Things (IoT) as main areas. The expected result is to sort recyclable material from non-recyclable material. We labelled and annotated thousands of images of plastics, metals, glass and cardboard objects. The data was collected from different sources such as collecting images from local shops and images available on google or other sources. The model is trained using amazon Sagemaker object detection algorithm using Single shot detector and VGG-16 Net as its base network. Next it will be deployed on Raspberry Pi equipped with pi camera. The device will be connected to the amazon cloud and send images for processing. Finally, we will attach a 6 DOF robot arm to our raspberry pi that will sort and pick different materials into different groups (recyclable or non-recyclable).

908. FRIENDSTER

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Some people get stuck in places like airports, train stations, and many other places. As technology advances, people prefer to view many applications available on the Google Play store. They had nothing to do and didn't know anyone nearby, so they could use our app to communicate with others to pass the time and have some fun with them. However, our application provided them with a platform where they could easily chat with real-life people who were nearby. They can also use an interest-based filter to locate people who share their interests.

909. TO THE GOOD DAYS

Project Advisor	MR. REHAN ABBAS
Status	Completed

We are trying to do something innovative for the game development industry in Pakistan. Majority of our local developers are more oriented to application or software development. There is a huge market <S25BS005> SDP Phase I (RS) Page 278

for gaming in Pakistan and it is expanding exponentially day by day. In the past year due to Coronavirus, gaming has grown a lot in Pakistan and it is only growing more and more since then. We plan to glorify this market with our game as not many major projects have been done in our city or even country. We plan to include our local language and landmarks in the game to make it even more attractive and interesting for our local target audience.

910. PUNJABI SPEECH RECOGNIZER USING DEEP LEARNING MODEL

Project Advisor	MR. REHAN ABBAS
Status	Completed

There are many Speech Recognizers for almost all languages, but we want to develop a speech recognizer for Punjabi Language specifically. It will take the Punjabi speech and convert it into Gurmukhi language. Gurmukhi is a special language which is used to write Punjabi. The reason why we want to do it specifically in Punjabi is because we believe that Punjabi is very neglected and it is not given the importance it deserves. In view of above, we intent to make a speech recognition software that utilizes Normal Language Preparing (NLP) and Deep Learning Neural Networks.

911. USING CLONED VOICE TO SPEAK CONTENT

Project Advisor	MR. REHAN ABBAS
Status	Completed

This is basically a computer software application through which a person can clone its voice by just providing a 5 to 10 seconds of audio and the voice that is being cloned will read the text of the image provided by the user.

912. PETCURA

Project Advisor	MR. SAAD AZHAR SAEED
Status	Completed

At present trend of pets is growing immensely. There is evidence that interacting with pets does reduce people's stress. Pets are comfort companions, their company makes people happy. They show us love. They keep people from lonely. Nowadays, taking their pet to a professional doctor or buying food and accessories for a pet is quite hectic and requires ample time to do so. So we are filling the gap between pet lovers and veterinary services through an app. We are providing an app which will provide instant professional veterinary services and food\accessories delivery at their doorstep. Customer/pet owner will be aware of the medical and vaccination history of the pet at the time of purchasing a pet. Pets will be uniquely identified by our app using their identification number and their ownership can be easily transferable from one person to another. Our app will provide different functions to help pet owner such as professional veterinary service in which the customer/pet owner can call an experienced professional doctor at their door step, Pet forum we help the customer/pet owner to interact with pet lovers community and can post queries regarding their pets and other customer/pet owner can reply to their queries more over doctors are also able to reply on the queries. Pet lover can learn more information regarding different breeds of pets through explore breeds section in our app. Pet owner now have the feature to maintain pet profile which includes all the medical record. We make selling or buying of pet much easier by providing the pet profile transfer functionality. We provide all the solutions faced by a pet lover in one app. So all you need is just PetCura.

913. HAUS SERVICE

Project Advisor	MR. SAAD AZHAR SAEED
Status	Completed

In this busy life technology plays vital role. So, keeping this view in mind we will develop a mobile application which provides a new platform to property owners and resident. Where Property owners can post ad's (e.g., upload images, fix pricing, Select Location/Area, categorized condition, Add Description, provide contact details, etc.) of their property. Which is shown at Application dashboard or can also be search using location to see posts of desired Area. Application also provides construction and technicians services. Service guys can enroll themselves by providing their details and skills. Any User can place their order for desired service and application will assign them a nearest service guy automatically. Customer can also give feedback for the services.

914. CROWD CLASSIFICATION

Project Advisor	MR. SAEED IQBAL
Status	Completed

Our proposed system crowd classification will classify people into two categories i.e. gender wise and age-group wise by detecting their body posture and mainly faces. In digital age, keeping the track of people is not easy by the old means. It is quite difficult differentiate people and know about the trend without digital mean. Our classification system will use multiple technologies. It will use deep learning and CNN model as main tool which are widely used for image analysis and interpretation tasks. Image processing and computer vision will be used for detection of the objects in the provided frame. It will classify people by their gender and age group. An image will be provided as input which. Will return output according to the trained model.

915. BREAST CANCER DETECTION USING DEEP LEARNING

Project Advisor	MR. SAEED IQBAL
Status	Completed

Breast Cancer is one of the leading cause of deaths among women, it is expected that one in every eight women will develop breast cancer in the life and it has a fatality rate of one in thirty-nine, which is about 2.6%. The problem arises in its detection as one could receive treatment if they were aware they were malignant before the tumor become substantially cancerous. However, to detect a tumor is no easy task when it comes manual i.e. from pathologist's perspective. This could very much result in false positives and negatives regarding the state of health of a women and could result in death. So we propose a method that would employ the use machine/deep learning architectures along with image processing techniques/algorithms that would detect presence of a tumor as accurately as possible. So that further calamities among women could be prevented.

916. BRAIN TUMOR DETECTION USING DEEP LEARNING

Project Advisor	MR. SAEED IQBAL
Status	Completed

Brain Tumor is one of the deadliest diseases. Brain Tumor occurs due to unnatural cell growth in brain tissues. According to World Health Organization (WHO), in 2020 there were 308,102 brain tumor incident cases reported with a death measure of 251,329 in both the genders. Statistics show that number of brain tumor patients are increasing by every passing year. So, it is important to detect the tumor at the right time, a small mistake can lead to the patient's death. MRI scans give us the detailed images of the brain. By the help of CV feature scan be extracted from the tumor area and then combined in a CAD system to generate a prediction model. A large amount of images are given to the machine learning algorithm to run again and again to train the model. There is a high chance of error when doctors detect brain tumor manually through MRI, so we are going to create a hybrid system by combining automated and manual feature extraction to get accurate results.

917. AR FOOT SCANNER

Project Advisor	MR. SAEED IQBAL
Status	Completed

It's been decades since many shoe manufacturers used procedures that only gave them a rough concept of the foot shapes and sizes their intended customers' intended customers'. As a result of the inclusion of AR foot scanning technology into footwear retail businesses, our research was able to amass a large collection of AR foot scans from across the world. Using the mean width, instep height, and heel width of all the foot scans in each length class, these results were then averaged. The findings of this study show that the mean foot measurements vary widely between regions, genders, and consumer groups. It is recommended that each length class include at least three different shoe widths to accommodate the needs of as many customers as possible. Old last grading tables should be updated to reflect the foot dimensions of today's clients, since a shoe intended for one group of individuals may not fit another.

918. CAT RECOGNITION THROUGH FACIAL FEATURES

Project Advisor	MR. SAEED IQBAL
Status	Completed

Since very little work is done for facial recognition in the field of animals, it is proved to be a difficult task to differentiate between varied species of cats. Some work that is done is easy to implement but has a risk for the life of animals. A system (model) should be designed which uses image processing and different algorithms of machine learning and computer vision for detection and recognition of different types of cats. In addition to some previous results and methodologies from other articles referenced as [4] and [8], we will add more features, patches and calculations. Hence, the accuracy is expected to improve and be greater than the outcome of those in previous related work making our model the most desirable recognition system.

919. TOUR GUIDE USING AR NAVIGATION

Project Advisor	MR. SUNEEL KUMAR
Status	Completed

By keeping in mind, the different problems faced by tourists our app consists of AR navigation to navigate tourists to worth seeing sights and with AR scanner they will scan different artifacts with a marker to experience different AR-based animations and historic details about that specific artifact. For the duration of the FYP our target will be to implement this for two specific locations, namely Badshahi Masjid and Greater Iqbal Park (Minaar – e – Pakistan).

920. SIMULATION OF OPTICAL LENSES AND MIRRORS

Project Advisor	MR. SUNEEL KUMAR
Status	Completed

As COVID-19 increased disastrously during the 2019 another huge challenge and set back is that usually all Pakistani schools are left with no option but to opt for the online version of teaching for most part of the academic year and schools have been completely restricted from allowing students to go into labs and perform experiments. Virtual simulating tools (**Simulation of optical lenses and mirrors**) is the need of time and a science lab where experiments can be performed virtually in 3D virtual environment. A simulation software can help student to study about the optical lenses and mirrors and perform the practical problems in a 3D virtual environment on their mobile phone. And Learning Science through Simulation.

921. SIMULATING ARRAYS USING AR

Project Advisor	MR. SUNEEL KUMAR
Status	Completed

Although the physical world is 3-dimensional, mostly we prefer to use 2-dimensional media in education. The combination of AR technology with educational content creates new types of automated applications and acts to enhance the effectiveness and attractiveness of teaching\ and learning for students in real-life scenarios. Our aim is to build a mobile application by using the means of Augmented Reality. The Array is the core of programming and students get stuck in it when they get errors in its understanding/implementation. Actually, our FYP is a learning app in which students can get different concepts of arrays using augmented reality. It's important to visualize a concept for its better learning. For this sake our app will have two modules i) Learning ii) Interactive Module. Moreover the most important sector of our society is the Educational Sector. It is affected the most during the COVID-19. So, our project supervisor is considering working on an educational-based application to help the Virtual Learning Education System. His DSA and MPI based AR mobile applications are also in the process of development, and our FYP Simulating Arrays using AR, is one of the contributions to this programming stream. So by the suggestion of many experienced professors who are teaching ITC students, here we are going to make an interactive AR-based mobile application in which we tackle the basic problems that a programming student had in the starting phases. The main goal is to implement operations like (searching, sorting, swapping, indexing, etc) in AR in such a way that students can learn all these concepts and once he/she gets all concepts he can perform some tests to evaluate his understanding

922. AR FOR KIDS EDUCATION AND MORAL ETHICS

Project Advisor	MR. SUNEEL KUMAR
Status	Completed

923. SCRATCH USING AR

Project Advisor	MR. SUNEEL KUMAR
Status	Completed

A mobile application based on Augmented Reality (AR) to facilitate better understanding of programming concepts for students and children. App will allow user to create their algorithm with help of blocks and then show their algorithm implemented by character in AR through their mobiles camera in own their environment. It will help them to relate basic programming concept with real world. When students are not exposed to programming concepts from an early age, they find it very challenging and difficult to learn concept of programming when they are enabled to visualize them which is why we are introducing augmented reality with block-based programming to make coding interesting and easy.

924. COMMINDER

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

The problem of authenticity and connecting with the audience was solved by social media platforms a long time ago. One issue which exists is feedback analysis, what users like, dislike, on what grounds or features a comment was made and what its nature was. Our aim is to develop a generic solution for users of Twitter, YouTube, and can be further extended if other platforms API's give access to extract comments and data. The data will either be extracted by a link to mentioned sites or the user can also provide it in a CSV file for analysis, which will be analyzed to generate a statistical report using machine learning and artificial intelligence. The report will consist of a three-level annotation. Given data will be classified as "Recommended" or "Not Recommended" at first level. At the next level, both the recommended or not recommended data will be further categorized as a positive or a negative review and at the third level, the negative or the positive reviews will be categorized on the basis of their features or a general category. Like how many people have recommended a product, policy, or have not recommended. If it is recommended it then is a positive recommendation or a negative recommendation and if it is not recommended then is it likable or hateable or they are neutral about it for this we need knowledge of Machine learning, Python, Django, Web Development.

925. AQUA FARM

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Due to urbanization, there is a land scarcity to overcome a huge need of food for our population, the vegetables available in market is unhygienic and unhealthy due to pesticides and dirty water. We are introducing automated vertical hydroponic farming to grow maximum food in minimum space. Moreover, hydroponic works on filtered water instead of soil so there is no need to spray pesticides on vegetables or fruits. Therefore, our food will be healthier and pesticides free and produce maximum production in minimum time and space due to vertical hydroponic farming as it grows 5 times faster than conventional farming. Our automated vertical hydroponic system will automatically control the flow of water, distribution of nutrients, monitored the growth of plants and pH level of flowing water through web portal.

926. VIRTUAL BOXING COMBAT WITH PHYSICAL EXPERIENCE USING ARDUINO

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Virtual reality is the use of computer simulation to produce a virtual world, providing users with a variety of sensory simulation, which enables users to feel as though they are in the virtual world. Right now, three-dimensional (3D) PC illustrations innovation can introduce reasonable 3D enhanced visualizations. Notwithstanding, framework communication is still mostly through explicit intuitive gadgets for framework control. To empower the player to control the game instinctively, this review utilized a right now famous Arduino innovation to do plan of intuitive control gadgets for computer generated reality. The interaction design in this project is based mainly on a virtual reality Boxing game. To let players, carry out punching more intuitively in the boxing game, this project used actual sensors, called "Arduino". The implemented system was roughly divided into two components: an oculus module and a receiver system module connecting to the server host. According to the results, our system cannot only realistically display 3D visual effects, but the Arduino sensations can also provide intuitive real-time game interaction for the user.

927. FACE CLOUD

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Photography is a trending industry of today's time. Just like any other industry it has its challenges too. We want to improve some of those hurdles which are stopping its progress. Usually photographers have to first take a photograph then edit all of them. Already they have a lot of work so they can never sort of filter out specific client wise photos or the junk photos from that large collection. This is hindrance effects professional level photographer as well as amateur level photographer. We want to give them an online platform where they can simply upload images in folder and all the images will be tagged and classified by the people in the images. This way photographer will not have to separate the images by themselves which is a hectic work to do. All the processes in this application will be automated. Users just have to create a project (event) and attach their folder created on drop box to our application and share the joining link to the participants where they can join to find their images at a particular event. They can also view and download images from face cloud application according to the photographer's permission. Imagine work of many days taking only minutes with our application. It will be more efficient and manageable so that photographers just takes photographs without worrying about any image management.

928. RURAL WATER DISTRIBUTION SYSTEM

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Rural areas of Pakistan are facing water shortage issues for domestic and agricultural use. Only few of farmers have access to turbines to water crops which make our agriculture slow. We will help them easy access to water by making a user-friendly system. In this system we'll work on hardware and mobile application. It'll eventually grow the agriculture of Pakistan. We'll create a hardware-based system that will use sensors which will be connected to turbines and a user-friendly mobile application

that will control our system through cloud computing. Our main challenge will be implementing an application which will work parallel to our system connected to the turbine. As most of the Pakistan's economy is based on agriculture so to make Pakistan economically developed country it is important to focus on its agriculture.

929. KHEL KHILARI

Project Advisor	MR. USMAN AKBAR
Status	Completed

Khel Khilari will be an online venue finder that will help users find nearby sports venue according to their requirements like price range, this will provide ease to all sport enthusiasts and players who aren't aware of venues near them. Knowledge areas of this project are Application development and Website development. It will also offer exclusive sales and marketing services to sports venue owners to generate revenue. In addition to that it will also provide features such as team formation, match making, live scoring, umpire hiring and rating.

930. NUTRO BOX

Project Advisor	MR. USMAN AKBAR
Status	Completed

Malnutrition is a global problem and child mortality is very high in many countries. We target school children because teenagers eat unhealthy food and lead to different diseases like kwashiorkor, beriberi, goiter, hyponatremia, anemia etc. This is due to deficiencies in protein, carbohydrates, fats, iron and sulfur. To address this, we will provide an online portal platform such as web and mobile apps, where nutritionists are available to help. Users can contact them at any time and advice on issues related to their child's health and diet. Nutritionist will analyze the deficiency or excess through several questions and then recommend proper diet plan according to needs on daily calories. Calories varies from person to person. Our platform also provides detailed information on calories from daily food intake. Users can customize their diet according to their preferences. It provides delivery function for user convenience; daily meal plans will be delivered to customers. Provide some additional functions, each food type and daily intake will be added to different categories, and user can add daily amount for calorie calculation through the app. This will help them to fully update their daily nutrients. This system will help parents to learn nutrition for their children and keep them healthy, because currently parents do not have proper advice on daily diet. It will mainly help reduce the victims of malnutrition.

931. TRUCK ADDA

Project Advisor	MR. USMAN AKBAR
Status	Completed

In Roads are the most important segment of infrastructure in any developing country. The rapid development and economic well-being is dependent on the road networks. Pakistan's transport system is primarily dependent on road transport, and the only industry which has not been developed according to moving freight is the truck service market in Pakistan, so to solve this problem we are thinking to build a web-based and mobile-based application to ease freight system in Pakistan and understandable for everyone. The application will build a chain between customer, broker, dispatcher and truck drivers. It will also increase the freight movement business in Pakistan which will be very beneficial for transporters as well as customers. The main purpose of this application is to make easy

the freight system in Pakistan as it is a big headache for many people nowadays due to many problems when they go in market to look for a truck they face a lot of problem and the main problem they face is fraud.

932. ANIMATICS

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

933. PETIPEDIA

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

Nowadays, nearly every family on this planet owns a dog, specifically a canine or a cat. People both rescue or purchase one. This fashion of getting pets is likewise growing in Pakistan. As consistent with the growing fees a not unusual place hassle whilst shopping for pets is confronted through many dog owners. Breeders regularly supply incorrect breeds or 1/2 of bred cats through labeling them as purebreds which is typically bought at excessive prices. Taking this hassle under consideration we introduce our utility. So, on this project, we're going to endorse an answer for the above defined hassle with the assistance of photo processing and gadget studying. The cease product can be mapped on a cellular utility. The utility affords customers with beneficial analytics and records approximately their pets including a cat or a dog. The utility targets to take a runtime photo from the consumer or photo also can be uploaded from the device, analyzes it and presentations the breed after acting numerous image primarily based totally trying out in conjunction with different records concerning their dog. The utility permits the consumer to talk and proportion with human beings everywhere in the globe, consumer also can create a dog profile to save essential records in their dog. A few packages have been made on this location however maximum of them are confined to 1 animal or include unique capabilities including a few have been to be had best on android or require paid subscriptions etc. The largest task of our project is growing a version of the use of deep studying and educating it at the dataset. The regions in order to be used inside the project can be photo processing, gadget studying and cellular Application. We can be having an expertise of the utility location whilst operating at the project.

934. MATH HUB USING AR

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

Math hub works in this kind of way that students can examine mathematical ideas with the assist of AR. The subjects we're masking are as follows: The app works in this kind of manner that it calls for a student to be interactive as well as responsive. The foremost interface of the app accommodates of portions one is learning mode and the other is quiz/check mode. When a user selects the gaining knowledge of mode, exceptional subjects will appear. Let's say person selects the "Set principle" then

it'll ask for a simple surface to pick from his cell digital camera in-order to calibrate. After calibrating, software will display exceptional units in a form of Venn diagram floating inside the air respective to the user in his/her mobile display.

935. PREDICTING MOVIE RATING WITH MULTIMODAL DATA

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

In this modern era there is a need for movie stakeholders (producers, directors, crew, cast already in the movie industry or aspirants) to know the kind of movie to invest in which will, in turn, be beneficial before theatrical release. How well the movie will go? Will people watch it? How good it will be that if we can predict rating before theatrical release. However, it has become a trend to predict the rating of the movie. Previously people used to predict the data through social media comments, likes and shares. It will help film maker to get great prediction before release of movie. The aim of this project is to design an efficient movie rating prediction model with the help of movie poster and deep learning algorithms. We investigate the effect of feature extraction techniques on supervised machine learning classifiers using multimodal data, from available movie datasets (IMDB [8] & TMDB [9]). This will help a number of businesses relying on the movie industry in making promotional and marketing decisions.

936. SIGN MOTION RECOGNITION SYSTEM FOR DEAF-MUTE PEOPLE

Project Advisor	MR. WAQAS ARSHID
Status	Completed

Over 5% of the world's population or 430 million people require rehabilitation to address their 'disabling' hearing loss (432 million adults and 34 million children). It is estimated that by 2050 over 700 million people or one in every ten will have disabling hearing loss. Today, the estimated total population of Pakistan is 200.81 million, which means that there are approximately 10 million hearing impaired citizens in Pakistan. Sign languages are developed around the world for hearing-impaired people to communicate with others who understand them. There is a persistent communication gap among deaf and non-deaf communities because non-deaf people have less understanding of sign languages. So, our system will be going to recognize the sign and sign motion of deaf people. This system will be going to help many people who don't know sign language. It is going to help normal people to communicate with deaf people. We are focusing on the sign motion of the language to reduce the communication gap. There are many different signs and motions in sign language every motion and sign have its meaning. We are going to use a camera sensor for motion recognition. We are also going to create our dataset for the recognition of the signs. This dataset will consist of 2-second clips of different motions. Sign Language Recognition is a breakthrough for helping deaf-mute people and has been researched for many years.

937. EMAIL SERVER PRO

Project Advisor	MR. WAQAS ARSHID
Status	Completed

The project email server process divided into server module, client module and email inbox module. Server accept the connection from different clients through server socket class and all the details regarding client connection establishment sending, receiving, and termination is stored in the server. Clients can connect to the server when server is active. Each client can send and receive mails, attachment to other clients. Clients username and password are stored in data files. Email inbox model handles all the function related mail like mail forwarding, view attachments and save attachments. It supports both client and server sockets. A server socket can be referred as to a socket that can accept many connections. And a client socket is a socket that is connected to a server socket.

938. SENTIMENT ANALYSIS OF DEPRESSION

Project Advisor	MR. WAQAS ARSHID
Status	In Process of Completion

939. JUST WATCH IT - TICKET BOOKING APP

Project Advisor	MR. WAQAS ARSHID
Status	Completed

In the modern era of today a person can receive useful information in the matter of seconds, they can search for flights and book a ticket on a plane sitting at their home, they can book a ticket for any bus they want to take. But when it comes down to cinemas the option can become a little limited and difficult. As far as we have seen this problem hasn't had been brought much into light as it is not that big a problem. But does not change the fact that it is still a problem. So we chose to finish this problem of users trying to visit different websites to book a ticket for their favorite movie but going through the hassle of trying to find the perfect time that suits them according to their schedule is a problem. Not to mention doing different searches to finally be able to find the perfect time according to the user. We plan to offer an application that will allow users to acquire all the information of the cinemas and their schedules with the movie they are playing. We also plan to make the application with multiple features that no other booking application offers. The user can make their account on the app and will be greeted with a welcoming home screen which will be the dashboard of the app. From there they can visit the variety of options we will provide them, some including: movie trailers, movie schedules, cinema list, cinema food menu, payment method etc. and much more.

940. NETWORK INTRUSION DETECTION USING MACHINE LEARNING AND DEEP LEARNING

Project Advisor	MR. WASEEM ASLAM
Status	Completed

Web-based applications are increasing very rapidly on the Internet, thanks to advancements in computers and technology. As the number of online applications is increasing, different types of cyber-attacks are increasing as well, which makes these applications vulnerable to cyber-attacks. These vulnerabilities exist in JS Libraries which are used while developing the site which results in the theft

of personal information, data loss, and denial of data access during data transmission. Web applications(websites) use HTTP/HTTPS protocols to request and fetch data from the servers. These protocols have one or more fields inside the header, where most of the exploits and payloads can be injected by the attackers. According to The Open Web Application Security Project (OWASP), 80% of the web attacks are done through HTTP/HTTPS request queries. Cross-site scripting (XSS) is one of those online security attacks in which malicious code is injected into web applications from untrustworthy sources. And when the legitimate user tries to access that page, the page will be loaded on his machine and XSS scripts run, which results in stealing of personal information. Our model uses CNN LSTM to train from the dataset and for the detection of XSS attacks in live traffic. Our study will provide a comparative study of using 1CNN and 2CNN for the detection of XSS attacks. The system will also be able to alarm the admin for suitable action if an attack is detected.

941. FACTIIVE NETWORK, A DECENTRALIZED REPUTATION

Project Advisor	MR. ZAID MUNIR
Status	Completed

Credit Reporting Agencies have huge impact on economic growth but the number of errors produced in credit reporting is astonishing, resulting in misaligned economic and legal incentives. More than one in five consumers have alleged inaccuracy in their credit file by the Report appeared in CNBC on September 27, 2017. Lenders respond to this incorrect data by offering higher interest rates, less favorable terms, or denying credit. For this, we are developing Factiiv network whose focus is on decentralized reputation in which the participants are self-sovereign entities establishing reputation. Reputation is created by lending or satisfaction with products/services and its inverse, attested by incentivizing participants where successful or fraudulent attestations will affect their reputations. These steps will be performed to generate credit reports which provides detailed information about credit activities of a person/organization, represented by credit scores. This report helps lenders to determine how likely they will get back their loan and measuring individual's reputation. This will provide a solution where decentralized credit reporting will be done and customers will have control over their credit and payment experiences, their identity will be pseudo-anonymous and self-sovereign. The system facilitates customers for masking personal information and only reveal required information for a specific process on their own will. With this, credit reporting agencies monopoly can be broken and here, customer's sensitive information cannot be sold or used without their consent.

942. CITIZEN TRAFFIC PORTAL (CTP)

Project Advisor	MS. FARAH NAAZ
Status	Completed

943. FASHION STYLIST

Project Advisor	MS. JAVARIA ARSHAD
Status	Completed

The goal of our project is to create a mobile application that can help us to buy clothes, find the nearest places that we can find those clothes, organize our clothes digitally and have Ai Chat bot that helps us chose outfits by sitting at our home.

944. KAROBAAR

Project Advisor	MS. JAVARIA ARSHAD
Status	Completed

Our system facilitates entrepreneurs by providing them a detailed market analysis of their desired market which should help them in deciding what type of business to open and also what area to open it in. Firstly, the system will estimate the area of the houses in a society using online society maps and google maps and also keeps a count of the total number of houses present in that society. Using the information acquired in this step, the system will be able to estimate the potential customer base of the new business. Secondly, the system will analyze the market already present near or inside the society and provide a detailed analysis of types of businesses already present in the market. System will also provide the types of businesses missing in that market. Using the information acquired in this step, the system will be able to provide a detailed analysis on the market already present near or in the society which will potentially be useful in deciding what type of business to open. Lastly, system will give an analysis on the quality and standards of the businesses already present in the market by performing a detailed analysis on the user reviews of the businesses present on google reviews. Using information acquired in this step, the system will provide a detailed analysis of the quality of the businesses in the market which will potentially be helpful in making an informed final decision as to what type of business will be profitable to open in that market.

945. ROAD PULSE POSTER (ANDROID APPLICATION)

Project Advisor	MS. JAVARIA ARSHAD
Status	Completed

Due to immoderate violation of traffic regulations, there is a significant increase in fatal road accidents and not having reinforcements right away has increased the death rate by magnitude. Our project is basically based on web and android application which uses custom trained model YOLO v3(subject to change) on a custom dataset and creating a way to detect a road anomaly such as crash event, to keep the track of such events and respond in real-time.

946. ENDEAVOUR

Project Advisor	MS. MAHAM MEHER AWAN
Status	Completed

947. SYMPATHY

Project Advisor	MS. MARIA ZAFAR
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Status	Completed
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A number of restaurants, marriage halls waste their food and they do not donate their food instead waste their extra food due to hassle of approaching someone for the food to be donated. So, we are here to help poor and save the food. We made a system that restaurants will not waste their food they will donate to nearby NGOs and NGOs will donate to the needy. Our app will authenticate the NGOs before giving them donations. We help them by collecting food, money, Rashaan, etc and our system will also make sure that the donation goes to the right NGO. We also survey that sometimes fake NGOs take donation but our system ask for proof prior to registration through a systematic approach.

948. BLOCKCHAIN BASED E-VOTING SYSTEM

Project Advisor	MS. MARIA ZAFAR
Status	Completed

Elections can be an important event in modern democracy, but most societies around the world do not trust the critical electoral system for democracy. Election operations, EVM (Electronic Voting Machine) hacks, election operations, and voting booths capture the major issues of the current voting system. This system tends to set up an electronic voting system that can solve the problem. Electronic voting is an increasingly important trend in society. Block chain technology is an exciting technological advancement in the world of information technology. Block chain technology to overcome these problems provides E Voting facility with decentralized benefits and is primarily used in the foundation of E Voting systems due to the benefits of end-to-end validation. The process of conducting elections and implementing block chain-based electronic voting. This improves security and reduces the cost of running national elections.

949. REALTIME CLOTHES STORE (KHELO AUR PEHNO)

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Completed

Real-time Clothes Store is a different platform from the subsisting platforms because of having some unique functionalities. It involves the Realtime Data Retrieval. That's mean, Realtime Clothes Store has ability to server code push content to connected clients instantly as it becomes available, rather than having the server wait for a client to request new data. Realtime Clothes Store will support "server push" functionality, in which server code can call out to client code in the browser using Remote Procedure Calls (RPC), rather than the request-response model common on the web today. Realtime Clothes Store will be a Progressive Web Apps (PWA). PWA is intended to work on any platform that utilizes a standards-compliant browser, including both desktop and mobile contrivances. The main benefits of PWA are that we build only one app which will run on both platforms and it will available in offline mode. We can also show notifications on mobile notification bar using PWA. The other paramount conception which makes Realtime Clothes Store more valuable is that we are introducing MACHINE LEARNING in our application to enhance our sales performance. Using Machine Learning, we will build a model to check when we need sales. Using Machine Learning Models, we will be notified by the system that what products are not selling. System will suggest the % of discount for the sale automatically. The other strategy which makes Realtime Clothes Store more different is that we are introducing different Gaming Activities in our application. Its foremost purpose is to magnetize people to play games and earn credit. After achieving a certain magnitude of credit, user can buy a product of any type from the store without any cost. Realtime Clothes Store will build using

latest technologies and tools. For the frontend, we'll use ANGULAR 12 and for backend we'll be using .NET 5.0. The Realtime Clothes Store is an intervention that has no commensurable platform exist based on these technologies.

950. E-USTAAD

Project Advisor	MS. RUBAB JAVAID
Status	Completed

Due to the prevalence of Covid 19 pandemic situations coaching centers are not able to conduct physical classes for students. This thing influences both tutors and students because students face problems in understanding the concepts and on the other, Tutors face unemployment. In the designed system the students will come with queries regarding any subject and tutors will give the answers regarding questions which are asked by students for free of cost. Students can directly approach tutors and experts for comprehensible concepts. (e.g., computer science, mathematics) and students can also pay for the courses and personal tuitions. So, there will be no tutor who faces unemployment. After hiring the tutors, students are requested to give feedback regarding the task done by the tutor so others can also access that tutor. Tutors and subject experts will also have facility to offer their own courses in which they have expertise. Students matriculate in courses by paying the course pay and get the lifetime excess of course video(s) and at the end of course E-certificate will be generated for those students who completed their assessments.

951. A MULTI-CLOUD MANAGEMENT SOFTWARE

Project Advisor	MS. SADAF BALOCH
Status	Completed

952. FRUITELLE

Project Advisor	MS. SAHER ZIA
Status	Completed

With an increasing agriculture industry, the demand for fruits also increases with large shipments of fruits being exported and imported. Identifying those fruits and telling if they are rotten or not can be a very hectic task. We plan to make an application that will bring ease to this problem and will be a proper solution to overcome this problem. This application would be easy to use and will consist of a trained model with the CNN as CNN is one of the most effective algorithms available for detection in images. Our trained model will be able to count fruits in the image and identify the fruits furthermore it will also detect if that fruit is rotten or not.

953. KARAYEDAR

Project Advisor	MS. SAHER ZIA
Status	Completed

The demand for hostels is increasing day by day. As number of students tend to move from rural areas to urban area for education and working purposes. Thus, keeping the problem in our minds, we want to develop a platform for people (especially students) to find a safe place according to their requirements and needs. The main focus of this project would be on registering maximum number of hostels and apartments. This application will facilitate the user with an interface through which he/she can check the availability of rooms in hostel or availability of rooms in apartments within the radius of 2km. This platform will provide a feature to users for of customizing their mess and this platform will have an comment base review analysis for behavior tracking and for better user experience.

954. AALIM ONLINE

Project Advisor	MS. SAHER ZIA
Status	Completed

The project will primarily be aimed to help and facilitate the Muslim people as well as others who want learn about Islam. People who have different questions regarding their own personal problems or any issues regarding Islamic laws and teachings. We have come to learn that people face various difficulties in their day-to-day activities which involves the role of Islamic laws, so through this application we will be able to help those out who need basic Islamic insights on certain problems or need guidance in any Quranic teachings etc. Hence the aim of this project is to develop a user-friendly application which includes a search function which will allow the user to search through any Quranic verse or hadith using keywords. Additionally, we will help out those people who need to calculate zakat and also calculate sadqa-e-fitr, Moreover, this app will allow the user to learn the proper way of offering prayer using animation. So as a whole this product is going to be so beneficial and helpful for the people who always wanted to seek help from the light of Quran and hadith without hesitating on asking little things from the scholars or teachers. So no one will be feeling embarrass on asking things to scholars, where this platform is going to help such peoples. User will just type its problems or questions in key words and will definitely get a reasonable reference from the Quran verses and hadith.

955. VEHICLES DICE

Project Advisor	MS. SAHER ZIA
Status	Completed

956. SDN BASED DDOS ATTACK DETECTION

Project Advisor	MS. SARAH JAVED
Status	Completed

Software Defined network (SDN) is an evolving field for the management and designing of computer networks. The main concept behind SDN is to separate the control plane from data planes. The structure of controller is centralized so, DDoS (Distributed Denial of Service) attack that can easily exhaust the switches and their communication and computing resources and also the controller. Thus,

they breakdown the whole network within a short time. This method will detect and also mitigate the DDoS attack by using hybrid technique entropy and destination IP address and time-based mitigation. The main objective of this research is to propose a light weight and reliable method to detect the range of DDoS attack at its early stage. In old-style networks by congesting, they try to bring down the services running in the network. With extra traffic loads or to reduce the network speed by congesting the available bandwidths. Therefore, a huge load of attack traffic targets a certain destination. In software defined networking the attack traffic could be distributed as much to skip the detection mechanisms to target the controller and switches.

957. POT HOLES DETECTION

Project Advisor	MS. SARA KHURSHID SIDDIQUI
Status	Completed

958. INTELLIGENT CORNEA

Project Advisor	MS. SARA KHURSHID SIDDIQUI
Status	Completed

Rapid expansion of metro cities has given rise to security concerns and has resulted in increased need of intelligent CCTV cameras to ensure the safety of people. Now days we don't have such surveillance system that can produce a useful output. Many incidents happen but are not reported because there is no such system in existence that can report these incidents. Today, due to cheap technology, we have large number of videos i.e., surveillance videos which are the main source to capture real time abnormal activities but for automatic detection of different anomalies, we need to design a system which took such surveillance videos as raw input and then produce a useful output. The output means the specific anomaly which needs public and authoritative attention so that such events can be minimized or at least properly deal on time. So, by using the surveillance videos and incorporating deep learning solution with the data, we may be able to assist the humans to detect anomalies at the spot. Our project aims to make these cameras useful at detecting crime in real time. Our system will analyze the raw footages and will detect anomalous activities. If a camera detects an anomalous activity, it will trim the specific anomaly part and will report this anomaly to the concerned department which should deal with the anomaly like in case of arson, our software will notify the fire department and in case of road accident, our software should notify Hospital and Police department. Our system will be able to detect anomalies in any surveillance videos. Our system will store surveillance videos categorically in database for further easiness of system.

959. GENETICALLY OPTIMIZED OS-ELM FOR DIAGNOSING METABOLIC SYNDROME (S22)

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Metabolic Syndrome (MetS) constitutes of metabolic abnormalities that lead to noncommunicable diseases, such as type II diabetes, cardiovascular diseases, and cancer. Early and accurate diagnosis of this abnormality is required to prevent its further progression to these diseases. We will present a method to diagnose the risk of Metabolic Syndrome using machine learning and a non-clinical approach i.e. by genetically optimizing OS-ELM. We will evolve OS-ELM by using genetic algorithm to optimize the parameters of OS-ELM and its training input sequence. We will use the genetically optimized OS-ELM algorithm to classify individuals as either being at risk of Metabolic Syndrome or not at risk of Metabolic Syndrome.

960. Autonomous Meme Content Generator

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Autonomous Meme Content Generation, AMCG, is a novel automated learning powered tool to generate content (text/image) based on a topic or cluster of keywords provided by the user, reflecting the popular internet sentiment surrounding that topic/cluster as derived from social media.

The goal is to supply researchers in the fields of sociology and economics with a tool to analyze cultural trends and their evolution surrounding a particular topic. AMCG can also allow Search Engine Optimizing professionals, content writers and marketers to analyze sentiment about their concerned topics/product categories and optimize their content for best market penetration and social media reach.

AMCG will use big data techniques for data collection involving Apache's big data tools (Hadoop, Kafka) and Selenium/BeautifulSoup Python libraries for data scraping. Scikit-learn, Tensorflow and Keras libraries will be used to develop, train and deploy ML/AI models. An interface to AMCG deployment will be provided, developed on the MERN/MNRM development stack.

961. SKIN DISEASES CLASSIFICATION USING CNN AND ELM

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Computer-aided diagnosis is a computer-based system that is used in the medical imaging field to aid healthcare workers in their diagnoses. Skin disease is known to have a significant impact on quality of life. Skin diseases are the fourth leading cause of human illness. Even though it is not fatal in most cases but it can cause discomfort and affect the quality of life. If it is detected early chances of successful treatment are greater. Dermatologist performs a non-invasive test by looking at the affected region, however there is a chance of human error due to diagnostic inaccuracies and as a result disease detection can be missed. Also, classification of skin disease is difficult due to many similarities between different disease symptoms and there is minor difference in how they look. In this era technology machine learning can assist us identify and classify these different diseases. Classification of skin lesions in various cancerous type plays a crucial role in diagnosing various, local and gene related, medical conditions in the field of medical science. Classification of these lesions in several cancerous types i.e., Melanoma Neves (NV), Basal Cell Carcinoma (BCC), Actinic Keratosis (AKIEC), Benign Keratosis (BKL), Dermatofibroma (DF), Vascular Lesion (VASC) gives some insight about disease. Skin cancer are most lethal type of cancer but patients have high recovery rates if the disease is discovered in its early stages. We propose a skin cancer detection and classification system based on convolutional neural networks (CNNs). The cell images are fed into a CNNs model to

extract deep-learned features. Then, an extreme learning machine (ELM)-based classifier classifies the input images. Skin diseases is one of common infection among peoples. Due to disfigurement and associated hardships, pores and skin disorders reason loads of trouble to the sufferers [1]. We have used the (CNN) convolutional neural network as the classifier method. CNNs Convolutional neural network is one of great or state-of-the-art performance among Extreme learning machine (ELM) artificial intelligence techniques used in image processing.

962. V2D: VIDEO TO 2-D ANIMATION

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Pakistan is missing out on a multibillion-dollar industry, Game Development, the reason being that we lack resources and not every new developer can afford to have expensive equipment.

One of the most timing consuming aspects of Game Development is animation which can make or break the game.

V2D aims to help new developers make good animations without any special equipment they can record themselves doing what they would want their in-game character to do such as jump, crouch and V2D will convert that into unity compatible file ready to be imported and used.

963. SOLAR PANEL CLEANING ROBOT

Project Advisor	DR. MUSHARRAF AHMAD HANIF
Status	Completed

This Project is solely based on the Robotics and Computer vision. This project is designed as a commercial product that will be a good innovation in the market. This project can also be use in domestic level. This will be a user friendly robot that will completely automated for cleaning the solar panels. The Major component of this robot are microcontroller, sensors, chassis, brush, and water tank. The robot is based on 2 chassis, one is on ground that contains water tank and Compressor for water pressure where the other chassis is place on the solar panel. Other chassis contains the sensors, microcontroller, nozzle and a not slippery wheelbase. The movement of robot is in vertical direction. As you power on the robot and place on the surface of the panel it detect the surface and starting move forward and also cleaning the panel. The sensors are connected at the edges of the robot to detect the image and process it to find the edges, this will prevent the robot from falling down but it will clean till the edges of the robot. Image detection is the significant part of the project because the robot is automated so if the robot doesn't detect the image properly it will fall down. This will also help in moving the robot freely on the panel.

964. SHARESPLITTER

Project Advisor	DR. REHAN ABBAS
Status	Completed

ShareSplitter is an android based Mobile app that synchronizes your music listening across many devices. Connect your devices over WiFi and listen to your favourite music with your friends by separating the music and vocals into distinct tracks, which are then saved as individual MP3

files. This app can detect the vocals and background music from a song. The app lets you save vocals and background, both, as separate files. Then, in the second step, it allows you to save simply the background music, leaving the vocals out.

Then there's a third method for splitting audio into two parts. It has no effect on singers or background music. It simply allows you to split an audio file into two segments and store both of them at the same time.

Our application will

1. Turn all Android Smartphones into a wireless multi-speaker audio system.
2. Separate Vocals and Background music into distinct tracks, which are then saved as individual MP3 files.
3. It simply allows you to split an audio file into two segments and store both of them at the same time and you can listen according to your mood.
4. Play music on all devices at the same time synchronously.

To accomplish the desired result we need to know following languages

- Back-End
- JAVA
- PYTHON
- Front-End
- XML
- The tools and environment that we need are
- Android studio
- Networking

965. TABIB E NUSKHA

Project Advisor	DR. REHAN ABBAS
Status	Completed

This application will be providing customers the ability to purchase medicines online while allowing pharmacists to see the orders and provide consultancy in case a customer seeks medical consultancy. The application is very useful for the users that are looking to get ease in ordering medicines. Using this user saves his time and money. These applications have large scope of growth in future.

966. AUTISM SOLUTION

Project Advisor	DR. REHAN ABBAS
Status	Completed

Autism Solution Application is going to control the flow of the babies who cannot speak from their initial stages and find it hard in pronouncing words. Our application will help them to improve their speaking abilities. Our application works as a speech therapist and parents for their children can use it. This application has many stages first is vocalizing sounds like (laughs, cooing) then next stage would be we will make him/her pronounce a word for example (mama dada)

In the third stage, we will make him/her speak daily using two or three words like (fruits name, vegetables name etc.) In the fourth stage, we will make him/her speak four-five words phrases.

The next stage will be the child test we will be using machine learning in which we will provide some quizzes for the kid. We will make a column separate for parents' guide which will help them to know how to interact with their child.

It is an application which will help the parents as well as children to provide the children the learning platform for their starting stage and also helps the parents to get satisfied about their children speaking capabilities. This application makes children more confidents and increase their speaking skills.

967. E-KHATA

Project Advisor	DR. REHAN ABBAS
Status	Completed

We are designing E-khata application which is basically an idea of dragging the old traditional way of opening up khata or registers, sheets and papers to a modern method where khatas are opened up within an application so that everything is stored within an application. The system is designed in such a way that the weekly debt reports are also sent to the customer and it is also within the reach of shopkeeper. The shopkeeper will be able to modify and update the debt and that statement will be visible to customers as well. We have introduced a feature where the data of each customer will be stored based on cloud service so that later onwards, there is no data loss in future. The application provides the user with a feature to pay online through e wallet services such as jazzcash, easy paisa and domestic bank services. The application is not just limited to debt payment but it creates a bond of trust and a good acquaintance between the customer and shopkeeper.

968. REVIEW SENTIMENT ANALYSIS

Project Advisor	MR. DANISH JAVED
Status	Completed

Online shopping sites have become a rich source of user generated data. Manufacturing, sales, and marketing organizations are progressively turning their eyes to this source to get worldwide feedback on their activities and products.

Millions of sentences in Urdu and Roman Urdu are posted weekly on social and shopping sites, such as YouTube, Facebook, Instagram, Twitter, Food Panda and Daraz. Sentiments related data on the web has great importance and impact on customer's, readers and business firms.

Disregarding people's opinions in Urdu and Roman Urdu and considering only resource rich English language not only leads to the vital loss of this vast amount of data but also ignores to understand the valuable reviews and opinions of Indo-Pak subcontinent people.

Our focus is on collecting data from online shopping sites related to Roman Urdu language for product review and analyzing them in terms of preprocessing, feature extraction, and classification techniques.

Three well-known classifiers are Support Vector Machine, Random Forest, Decision tree and k-Nearest Neighbor (k-NN). Their outputs include stop words removal, feature extraction, polarity determination, identification and extraction of important features.

Python language will be used to implement the classification algorithm on the collected data. The features will be extracted using TF-IDF technique. Other technique used for feature extraction is N-gram. The sentiments will be predicted and categorized among positive, negative and neutral using a supervised machine learning algorithm known as Naive Bayes Algorithm.

969. NON-FUNGIBLE TOKEN (NFT) PLATFORM

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

Non-fungible” more or less means that it’s unique and can’t be replaced with something else. For example, a bitcoin is fungible trade one for another bitcoin, and you’ll have exactly the same thing. NFTs can really be anything digital (such as drawings, music, your brain downloaded and turned into an AI). NFTs will resolve the issue of misuse of copyrights and authenticity of anything. block chain enables an NFT to be authenticated and the ownership verified by public metadata kept in a digital ledger. This Platform will generate and allow trade of NFTs. This will be the market place of NFTs.

970. MARKETPLACE FOR NON-FUNGIBLE TOKEN

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

As we know, currently the NFT market is worth trillion dollars and people are investing a lot. Still, they don’t have enough knowledge about its value and understanding. NFT stands for non-fungible token. It is a digital asset that has a unique identity to its owner or creator and it can’t be copied or manipulated with its original property. NFTs work on blockchain technology, which is decentralized and cannot be replicated. NFTs are secure assets and are safe for investing and business purposes for collectors, investors and entrepreneurs. This is the reason we are developing this project to enable our local community to be aware of this technology and receive their feedback and allow them to contribute so that they are able to explore the NFT market and opportunities for tech entrepreneurship startups.

971. STUDENTIFY

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

Our project is the development of Application named as “Studentify “. This application’s user will be Students of University level. This application will guide students to select their special courses like Uni elective and Cs elective. Using this application student can communicate with different users which also help them to make permanent connection for future. Students can share their queries regarding anything using chat panel. This application also helps students to remind them before Exam day by setting automatically using their datasheet and courses. Sometime students didn’t have enough time to type their code so this application will scan their paper code and make its .cpp file in application.

972. DIGITAL ESTATE (CONT)

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

Digital Estate aims to design and implement an online interface that allows users to view interactive urban land use maps on online property portals. This application aims to provide a solution to boring and non-interactive raster maps that are currently used on property websites like zameen.com or google maps used on some other property websites that are very hard to look at and find specific properties and do not provide complete information about a particular property and the housing society. Digital estate aims to design a machine learning model to convert raster urban land use maps

to interactive online maps, that is clickable and provides complete information about the clicked object on the map with an easy-to-use online interface for clients and users.

973. THEROHELP

Project Advisor	MR. KAMRAN SHABBIR
Status	Completed

Therohelp is a mobile software application used to create virtual interface like metaverse for therapies between patient and therapist for autism children. Now-a-days world has introduced latest technologies in relevant fields so virtual therapy (Therohelp) is a new way to use the system without being present in the room with your patient. We can simply use AR devices like Oculus or HMD etc. to interact with your *patient* and provide the necessary requirements. A user will wear Oculus and enter the interface using his/her mobile and enter virtual environment. With these devices therapy will be performed from anywhere.

Motivation: The motivation behind this project is very common cause of autism patients face these problems on daily basis on of our team member's family members were facing it so we went to Autism center and discussed the problem with the therapists and parents who face it daily so we decided to consider solution to this problem.

Problem Statement: Generally, the problem is to facilitate Autism patients and Therapist both so they have communicate easily without the restriction of being there in same room.

Approach: We visited Autism centers with our advisor to get to know about the problems they are facing and under which criteria therapies can be done virtually.

Results: Treatment will be very easy for the patient and Therapist both. Patient will not have to attend daily briefings.

974. SHAPE-UP

Project Advisor	MR. SAEED IQBAL
Status	Completed

VR has a huge potential in the gaming sector. The idea of virtual reality in gaming can offer fast growth rate in the business. VR games are fascinating that gives immersive experience in a 3D environment. Hence, VR games allow users to not only observe the 360-video content but also offer an immersive experience.

This application will be built for Football. This application will provide user a virtual environment. This application will help players fond of football playing at clubs to save their money. This application will let users improves their football skills for real environment. Our main objective is with a virtual environment where player can mature their skills without the real-world worries of failing.

In this project, we will use Unreal Real Engine 4 for development and Oculus Rift along with controllers. This technology offers an environment to convert your imagination into reality. The extraordinary features in the form of 360 views are attracting the businesses to incorporate VR into their marketing strategy. VR is efficient in clubbing vital elements into a versatile environment in various sectors.

975. SMART MEDICAL SYSTEM WITH AI AND ML

Project Advisor	MR. M. BILAL KHAN
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Status	Completed
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Undoubtedly, currently internet has become a dominant role in various aspects of life. In the era of digital technology, the internet is connecting people virtually all over the world. So, by keeping this thought in mind, we will create a Smart Medical based System using Artificial Intelligent (AI) and Machine learning (ML) techniques.

Primarily, the proposed online website base platform will communicate and diagnose the patient's condition autonomously by applying advanced AI and ML algorithms. Online consultation with the physicians for the satisfaction of the patient is another superior option in this regard.

This platform will be more efficient as it will save the patient time, and cost and will help the patient to diagnose their disease effectively using the proposed system. Furthermore, in situations like COVID-19 pandemics, this AI-based system will be considered more efficient and helpful.

976. VEHICLE HISTORY VIA BLOCKCHAIN

Project Advisor	MR. M. BILAL KHAN
Status	Completed

In the upcoming era of the Internet, online systems will play a crucial role in newly developed smart cities. Especially the vehicle-based systems ensure fast, secure transmission and accurate recording of the data. In order to overcome these challenges, this work is adapting Block chain technology for real-time application. Therefore, the main novelty of this project is to develop a Blockchain-based system in order to establish a fast & secure system that will be entirely decentralized.

Current vehicle registration systems have not been able to mitigate against the threat of tampering with the vehicle owners' details or at least keep track of the fraudulent transactions in the system. This has informed the need to review the current motor vehicle registration systems as well as the challenges faced in the registration of vehicle ownership details.

Block chain technology enables the development of decentralized business models that can be used to improve the safety and security of critical data. Based on the weaknesses of the current systems we are developing a system based on blockchain technology where the newly manufactured cars can be listed and registered on our system and when those cars are bought by the customers the ownership of the car will be transferred to the customer. In this way, we are keeping a track of all the transactions that were performed in the system including vehicle registration, transfer of vehicle ownership as well as verification of ownership transfer.

977. DIGITAL BEST FRIEND

Project Advisor	MR. M. BILAL KHAN
Status	Completed

Digital Best Friend (DBF) is an artificial intelligence-based 'emotionally intelligent' application that responds to your emotions, is easy to talk to, and fits seamlessly into your life, whenever you want to chat about your problems with someone without fear of being judged. It is an application aimed to assist people who are dealing with poor mood, stress, or anxiety, or who want to improve their emotional resilience and manage their mental health in a self-help setting. Our chatbot will employ Natural Language Processing (NLP) to communicate with the user via text.

978. PROFESSIONAL'S DEN

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

We are developing a web app with the main purpose of guiding the people and make them aware about the market, so that they do not get scammed. Also we are developing a place for community to come together and help each other out. We will be hiring professional with their respective experience about different domains of the market so that they can help out people in need and earn some cash as a side gig.

The Online website ‘Professional’s Den’ web application is developed to provide complete scam free solutions for all the users which can be accessed using the internet as a sole medium. It will enable users to set up their online profile as sellers from which they can provide consultation and maintain their rating and users as buyers can also hire professionals to help them decide and choose best value for money product or any course of action, users can be service sellers once they are verified by the system, now hiring people for help is costly, we have also an amazing community system where any user can create a community about some specific topic or product and people there can also support each other like reddit.

Now, why is scam prevention necessary? According to Common Wealth Fraud Prevention Center of Australia, “Fraud can be a traumatic experience that often causes real and irreversible impacts for victims, their families, careers and communities. Those who rely on government services (such as the elderly, the vulnerable, the sick and the disadvantaged) are often the ones most harmed by fraud” [2]. Fraud and Corruption are ever changing and according to the publishing service of the UK government, “prevention is the most effective and only solution” [3]. Spreading knowledge and giving guidance to the people is the step towards a better and secure future and Pakistan is in desperate need of this.

979. MUSIC GENER CLASSIFICATION

Project Advisor	MR. MOHSIN SAMI
Status	Completed

The project is based on the classification of an audio or music file according to its genre. The main problem is that audio clips or music files are sometimes complex to be relate to a specific genre but the music genre classification using machine learning techniques can predict the genre of audio file provided and shows a list of related audio sample files according to that genre. Since manually classifying each track of a music database according to their genre is a tedious task, Machine Learning Techniques to perform Automatic Music Genre Classification are used. GTZAN Genre Collection dataset will be used to perform the classification. The dataset has been taken from the popular software framework MARSYAS. MARSYAS (Music Analysis, Retrieval and Synthesis for Audio Signals) is an open source software framework for audio processing with specific emphasis on Music Information Retrieval applications. Dataset consists of 1000 audio tracks each 30 seconds long. It contains 10 genres each represented by 100 tracks. The tracks are all 22050Hz Mono 16-bit audio files in .wav format.

980. KEEP EVENTING

Project Advisor	MR. MOHSIN SAMI
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Status	Completed
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It is an online event management website project that serves the functionality of an event manager because such a system is the need of the hour these days as people are too busy with their hectic routines, they don't have enough time to plan their events from scratch and look after everything. This is where we come in, the system allows registered user login and new users are allowed to register on the application. The system helps in the management of events, users and the aspects related to the event such as music, food, lights, decorations etc. This proposed to be a web application. The project provides most of the basic functionality required for an event type e.g. [Marriage, Birthday party, College Festival, Office Get-Together etc.]. The client has the authority to choose from the pool of service providers according to their criteria, the system then allows the user to select date and time of event, place and the event equipment including every other service related to the event. All the data is logged in the database and the user is given a receipt number for his booking. The user can also cancel the booking in a specified time without any deduction. After that there are stages for example if a user cancels the event one week before than 25% amount is deducted, it rises to 50% if only 5 days are left after that no refunds are made on cancellation. The data is then sent to administrator (website owner) and they may interact with the client.

981. NAVIGATE

Project Advisor	MR. MOHSIN SAMI
Status	Completed

People almost always go to the supermarkets to buy groceries and other household things the reason being it is convenient and everything is available at one place. One huge problem that arises there is customers frequently find large grocery stores to be a maze. Trying to locate required products in a large store can be a difficult task, resulting in tension, frustration, and wasted time. Similarly, if a product is out of stock, the consumer will not know until he or she goes to the rack to look for it, which can be rather stressful as well as customers are unaware of products on sale. The solution we propose is to create an application that will assist customers in getting to their desired goods, as well as keeping track of their budget and alerting customers if they have gone over budget. The application will also display a message if the product that the customer is looking for is out of stock. Moreover, it will also notify the customer if the desired product is on-sale. Our main objective is to facilitate the customer and to help them complete their shopping as efficiently as possible. Customers will be able to effortlessly shop, view product information, locate products on their shopping lists, and traverse the store using our application.

982. GUN DETECTION WITH MACHINE LEARNING

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Although most available guns are used in crime, information about the 223 million guns available to the general public provides a content for evaluating criminal preferences for guns. From these sources, we know how often guns are involved in crime and the specific types of guns most frequently used by criminals. Every year, a large amount of population report gun-related violence all over the world. Violence committed with guns puts significant impact on public, health, psychological, and economic cost. Many people die each year from gun-related violence. There are many incidents held that people

having guns in public and they used in most criminals activities like robbery, street crimes and people use guns in marriages to showoff and in many cases this show off lead to many dangerous effect like someone die or injured due to usage of guns. Which can experience negative psychological effects over the short and long terms. Number of studies show that handheld gun is the primary weapon used for various crimes like break-in, robbery, shoplifting, and rape. These crimes can be reduced by identifying the disruptive behavior at early stage and monitoring the suspicious activities carefully so that law enforcement agencies can further take immediate action.

983. POTATO DISEASE IDENTIFICATION USING CNN

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Agriculture is one of the essential sectors for the survival of humankind. At the same time, digitalization touching across all the fields that became easier to handle various difficult tasks. Adapting technology as well as digitalization is very crucial for the field of agriculture to benefit the farmer as well as the consumer. Due to adopting technology and regular monitoring, one can able to identify the diseases at the very initial stages and those can be eradicated to obtain a better yield of the crop. In this document, a methodology was proposed for the detection as well as the classification of diseases that occur in potato plants. For this scenario, the openly accessible, standard, and the reliable data set was considered which was popularly known as Plant Village Dataset. For the process of image segmentation, the K-means methodology was considered, for the feature extraction purpose, the gray level co-occurrence matrix concept was utilized, and for the classification purpose, the multi-class support vector machine methodology was utilized. The proposed methodology can attain an Accuracy of 95.999%.

984. SMART E. PHARMACIST

Project Advisor	MR. SAEED IQBAL
Status	Completed

Smart e.Pharmacist is a mobile application that will be used to search for prescriptions or alternatives to medications that a user is currently taking. Patients may take many medicines for the same condition in the misguided notion that this may speed up the healing process, while in fact the Drug-Drug interaction of some prescriptions may cause harm to the patients. Using this app, the user may scan their doctor-prescribed prescription, and the system will determine whether the medication combination is safe to take. The app is divided into two interfaces: one for patients and one for qualified and licensed specialists. Users can look up medications based on their symptoms, consult a doctor, leave reviews, and so on. The Artificial Intelligence model will be trained using the datasets obtained from the DrugBank.

985. GLAUCOMA DETECTION USING DEEP LEARNING

Project Advisor	MR. SAEED IQBAL
Status	Completed

More than three million people are living with glaucoma, 2.7 million of whom aged 40 and older. In 2020 about 80 million people have glaucoma worldwide and the number is expected to increase to be

over 100 million in coming 20 years. Computers and the Medical field go hand in hand. Artificial intelligence has been playing a huge role in the medical field like early detection of disease, optimizing treatment, reducing complications caused during a procedure, and to reduce the time of hospitalization. Nowadays deep learning algorithms are being used to detect any disease at its early stage. Glaucoma is an eye disease which is caused when the pressure builds up inside the eye and damages the nerve which connects eye to the brain. Early detection of glaucoma can help to avoid loss of vision. Deep learning algorithms can help detect the disease at early stage.

986. TUMOR INFILTRATING LYMPHOCYTES IN BREAST CANCER

Project Advisor	MR. SAEED IQBAL
Status	Completed

Cancer is a most normal reason for death overall now daily. Expansion in pace of Breast Cancer is brought about by spread of cancer cells to human organs and tissues and furthermore cause because of late-stage diagnostics. Among various kinds of tumors, Breast Cancer is the most reason for death in women around the world. Automated Breast cancer classifiers use CT check pictures to distinguish and assume an indispensable part toward a beginning phase diagnostics of cancer cells in Breast. Computerized Breast Cancer classifiers are the fast improvement of AI procedures, particularly profound learning calculations, has drawn in much interest in its application to clinical picture issues. But Lymphocytes have become major problem in Breast cancer. Lymphocytes spread in Breast and make cause of tumor, it's the worst scenario of tumor in Breast.

After the pandemic of COVID-19, the universe of success and prospering has changed for certain. Individuals have become more terrified of ailments than they were at that point. Considerably more ever, the COVID-19 verified cases have really reached out to in excess of 10 million all around the planet. As how much checked cases broadened, it has become more essential to look out areas of strength for ruined individuals in a fortunate and cautious way. For this, universe of IT and Medicine has overseen different disclosure endeavors to beat the dangers of being disabled undetected, of which, many have neglected to see viral models. To settle this issue, the experts utilized thoracic x-support points and histogram-coordinated inclinations (HOG) extraction procedure which displayed to give the particular social occasion of viral models. These social event models give amazing by using unequivocal referencing of defilements contemplating the clinical pictures. Besides, the introduction of our proposed CNN gathering system for clinical imaging has been examined considering different edge-based mind affiliations. Absolutely when there is a rising number of a class over action association, the accuracy of tertiary party with CNN will diminish. Besides, the assessment of 10-move past cross-guaranteeing with issue assessments can similarly occur in our examination work to see various diseases brought considering chest hardship like Pneumonia Covid positive or negative. The proposed CNN model will be ready and endeavored with a public X-shaft dataset, which is really circumnavigated for tertiary and normal get-together purposes.

987. VALVE LEAKAGE MONITORING THROUGH HEART BEAT RATE

Project Advisor	MR. SAEED IQBAL
Status	Completed

Cardiovascular illnesses (CVDs) are the main source of death globally and cause around 33% of passing's overall An expected 17.9 million individuals kicked the bucket from CVDs in 2019, <S25BS005>

addressing 32% of every worldwide demise. Of these passing's, 85% were because of respiratory failure and stroke. Over 3/4 of (CVD) Cardiovascular infection passing's occur in low-and center pay countries. Out of the 17 million unexpected losses (younger than 70) because of no communicable sicknesses in 2019, 38% were brought about by CVDs. It is critical to distinguish cardiovascular illness as soon as conceivable so the board with guiding and drugs can start .Cardiovascular sicknesses (CVDs) are a gathering of problems of the heart and veins. Coronary episodes and strokes are normally intense occasions and are predominantly brought about by a blockage that keeps blood from streaming to the heart or mind. The most widely recognized justification behind this is a development of greasy stores on the internal dividers of the veins that supply the heart or mind. Strokes can be brought about by draining from a vein in the cerebrum or from blood clumps.

Our point in this undertaking is to utilize AI to recognize the ongoing state of their valve. We have designated the patient with valve issues. The heart has four valves that keep blood streaming in the right heading. At times, at least one of the valves don't open or close appropriately. This can cause the blood move through your heart to your body to be disrupted. Your heart valve illness treatment relies upon the heart valve impacted and the sort and seriousness of the sickness. Here and there heart valve sickness expects a medical procedure to fix or supplant the heart valve. A portion of the side effects for valve patients

- Whooshing sound (heart murmur) when a doctor is listening to the heart with a stethoscope
- Chest pain
- Fatigue
- Shortness of breath, particularly when active or lying down
- Swelling of your ankles and feet
- Fainting
- Irregular heartbeat

By thinking about the issue of valve patients. We are making a model to recognize the momentum state of their valve in light of the fact that Valvular heart illnesses (VHD) are one of the significant reasons for cardiovascular infections that are having high death rates around the world. The early conclusion of VHD forestalls the advancement of heart illnesses and takes into consideration ideal prescription. In spite of the capacity of current highest quality levels in recognizing VHD, they actually come up short on required exactness and accordingly, a few cases go misdiagnosed. Furthermore, assuming they determined it on time however to have the absence of assets or with the less data pretty much every one of the side effects the majority of our regular folks lose their life or deteriorate wellbeing in light of the fact that generally our patients have a place with walled urban communities or with metropolitan regions . The arrangement which we propose will help the patient to over the impact of valve sickness on time.

988. AUTOMATA-CRACKER

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

The project is based upon the concepts of Theory of Automata (TOA) which includes formal languages, Deterministic Finite Automata (DFA), Non-Deterministic Finite Automata (NFA & NFA-NULL), their conversions, transition tables, regular expressions, their union, intersection, divisibility, and closure. We aim to develop a software (a Web application) that will perform the above-mentioned functionalities and work as an “all in one” tool to help students in better understanding of the concepts of Theory of Automata. There will be 3 types of inputs, in type-1: the users will have to fill a form (restricted to the format of plain English language) for the desired formal language, in which they will have to enter all the requirements e.g. number of alphabets, the type of language to solve (starts with, <S25BS005>

ends with, contains, union, intersection), etc. in type-2: user can input the Regular Expression in written form to create and convert its automata machines. In type-3: using a menu-based Chatbot for easy input if the language to solve is unclear to the user. After providing input, the user will be given options to generate any automata which can be then converted into any other automata. After selection, the graphical result will be displayed along with the transition table as an output. Then the user will be able to perform string testing on it by entering different strings and can check if the string is accepted or rejected. As there is no such tool available that solves all of the problems of a formal language of the Theory of Automata, we have decided to create one in which there will be all the functionalities such as RE, transition table, NFA, DFA, NFA-null, and their conversions with strings testing. We will also provide the strings that are generated, both accepted and rejected, according to the language given and a menu-based Chatbot for the user's convenience. We have seen many tools online such as web applications and mobile applications, for example, Automata, AutomaTaker, Automata Simulator, etc. but none of these tools provided all the functionalities. Each one has accuracy issues or flaws in it. Some of these tools were providing some of the features but not all. So our web application will provide all the features that have already been mentioned. This application will really help students in their understanding of the concepts related to the Theory of Automata.

989. ROAD KILL

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

The biggest problem in this racing 3d game would be AI-for Bosses, design cars, map, and private networking. AI would play a major part. Without it the game won't be more fun and can't increase challenge and difficulty. Design cars and maps would provide greater options to choose from for the player. Private networking would be by far the import task. Build connection between players' devices via hotspot. Even if the internet is available or not. After all these tasks combined then the game would be complete.

To Solve the AI problem, the reactive types of AI-Systems would be best. Although they have limited capability, they can be used for automatically responding to a limited set or combination of inputs (Like Players Car movements and location) and make quick decisions. They are also easy to develop. To Build 3d car design, I can use the online 3d tools available on the internet to make their models and then use them in game. These 3d tools could also be used to make maps and the tracks according to their levels. In this Game, the private network would be based on mobile's Hotspot and Wifi connection. We would have to ask permissions first for Wifi and Hotspot uses and then code using their built-in function on hotspot and wifi to make our own private network.

990. BLOOD TRADE USING REAL TIME MAP AND MACHINE LEARNING

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

We are going to develop a blood trading application in which the users will be registered. When a recipient login to the application then the application will ask for the requirement of which blood the recipient needs.

- Our application will start looking for the donor a notification will pop on the screen of donors which will ask if they want to donate the blood or not.

- After two minutes maximum if not any of the donor respond to the blood request a screen will be pop on the screen which will show him the name and number of the donor so the recipient can contact them manually
- Health measurement will be taken.
- Our application will give the opportunity of bargaining for rare bloods if its needed.

Add on features. We are going to develop a blood trading application in which the users will be registered. When a recipient login to the application then the application will ask for the requirement of which blood the recipient needs.

- Our application will start looking for the donor a notification will pop on the screen of donors which will ask if they want to donate the blood or not.
- After two minutes maximum if not any of the donor respond to the blood request a screen will be pop on the screen which will show him the name and number of the donor so the recipient can contact them manually
- Health measurement will be taken.
- Our application will give the opportunity of bargaining for rare bloods if it's needed.

Add on features.

991. SNAP CART

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

This project will reduce and save shopping time of consumers, by providing bar code scanner in mobile app through mobile cameras. Reading bar code of the products through a mobile app synced with cash counter could save the customer valuable time. The main purpose of this system is to facilitate the customer, and provide them an alternative for hand carrying or trolley. SNAP cart gives billing details during purchasing each product and also gives total to the customer as well as cashier. Moreover, its efficient billing method enables customers to shop without any issue. There is no need to carry any products throughout the shopping. It is easily accessible for customer of every age group. The system will provide user friendly language interface which could be easily understandable. The system will be scalable as the customer can add as many items/products as he/she wants.

992. HUMANOID SOCIAL DISTANCING ROBOT

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Observing social/bodily distancing norms between people has turned out to be an vital precaution to sluggish down the transmission of COVID-19. We present a unique method to routinely hit upon pairs of people in a crowded state of affairs who are not retaining social distancing, i.e. About 2 meters of area among them using an self sufficient cellular robotic and present CCTV (Closed-Circuit Television) cameras. The robot is prepared with commodity sensors, particularly an RGB-D (Red Green Blue—Depth) digicam and a 2-D LIDAR to locate social distancing breaches inside their sensing variety and navigate in the direction of the location of the breach. Moreover, it discreetly indicators the relevant humans to move aside via the use of a set up show. In addition, we additionally equip the robot with a thermal digital camera that transmits thermal pictures to security/healthcare employees who video display units COVID signs and symptoms which include a fever. In indoor situations, we combine the cell robotic setup with a static wall-established CCTV digicam to similarly

enhance the number of social distancing breaches detected; accurately pursuing taking walks companies of people and so forth.

993. MEDICAL PRACTICE MANAGEMENT SYSTEM

Project Advisor	MR. USMAN AKBAR
Status	Completed

Abstract gives the summary of your project. You should focus on the problem description, significance of the problem, knowledge areas to be used and the results to be acquired. Make sure it does not turn out to be an introduction to the introduction / background but summarizes the whole project.

The healthcare market is huge. Especially in developing countries, healthcare facilities are still using outdated process models and most of them are not even digitized. The main reason is their budget and the lack of quality software that offers all the features they require. On the contrary, developed countries where healthcare facilities can afford expensive software solutions are performing much better. The goal of our system is to build a healthcare solution for small healthcare facilities such as spas, clinics, hospitals, etc. based in developing markets. Starting from but not limited to Thailand. Our aim is to build a flexible solution that can be adopted by any healthcare facility after minor configuration. Therefore, we aim to build a feature-rich yet flexible solution. Our product will primarily solve the day-to-day activities in a healthcare facility. Besides daily operation, we are going to provide a powerful health record system that is based on standard data storage and sharing approach following FHIR 7 standards. It will also allow for stock and product management, therefore offering an all-in-one solution to all facilities. Besides the core features. The core architecture is a web-based multi-tenancy application with real-time notifications and responsiveness. Allowing for ease of use to its users.

994. PROTECT THE BOSS

Project Advisor	MS. AYESHA ZAHEER
Status	Completed

The attention has been diverted from traditional learning methodologies with the advancement of technology, accordingly, kids nowadays (school level students) spend more time on computers, mobile phones, and other gadgets as they look forward to the entertainment and recreational stuff; hence, compromising their learning and lesson progress. Therefore, keeping in mind the growing interest in social app, we have developed a game to solve this problem; accordingly, the game will be providing entertainment as well as furnishing their learning skills.

995. HAMARI SAWARI

Project Advisor	MS. AYESHA ZAHEER
Status	Completed

In today's world where vehicles have become an essential part of our transportation, one who does not own any kind of convenience faces a lot of complications when in urgent need. Businesses that rent out vehicles requires a lot of formalities and procedures to obtain one. Hamari Sawari provides a quick and easy way to rent out a vehicle of your own choice within your budget just by following some simple steps on your phone screen.

This project will enable users to have vehicles readily available at their doorstep or nearby in the neighborhood. It allows users to rent any kind of vehicles (cars, bikes, trucks, bus etc.) from their nearest location as quick as possible. Users can rent vehicles of their own choice available in the application for as long as they require it within their financial limits (users can set price range for the vehicles they wish to acquire).

On the contrary, people owning vehicle(s) will benefit from this platform by renting out their vehicle(s) while relaxing at their couch and earning some extra cash passively. There is no need for them to drive their vehicles as a driver or rider for part-time or full-time job. Instead, those extra time could be invested somewhere else!

This application will search for vehicles nearest to your desired location and within minimum time limit. The owners (whose vehicle meets the requirements of the user), willing to rent out their vehicles, will be broadcasted with a notification and they can choose either to rent out or not.

Both owners and users can set the price range for the vehicles based on time (per hour/day/week/month).

996. SCHOTIFY

Project Advisor	MS. MARIA ZAFAR
Status	Completed

A student needs to search for the desired scholarships around the World through various search engines and websites. This is where the problem arises because internet has a lot of websites and data to surf. Every single website has to be visited individually and search for the required information accordingly. Our application handles this crucial challenge. This will be a real-time saver for all students. Our application is a web scraping-based model that will work on the principle that is extracting out the data according to the input by the user and then presenting that useful information back to the user. Our application will take input from the student and the required information and after the extraction of data; all the scholarships will be on the same page and accessible.

997. HEALTH GUIDE

Project Advisor	MS. MARIA ZAFAR
Status	Completed

The main goal of our project is to achieve a helping hand related to the health. **Health Guide** mobile application will provide guidelines with one click. It will guide people on how to deal with issues that can be dealt with home remedies that would not pose any threat to the health otherwise. Mobile application will provide suitable recommendations.

Health Guide is a mobile application that will provide guidelines according to given symptoms. It will help to reduce effort to the user/patient and also to the doctor regarding to work load. This application will work with the help of dataset with certain ALGORITHMS. The COMPETITORS entertains the application with huge amount of datasets which effects its execution time and they do not evolve machine learning in it. **Health Guide** we will use better and more efficient to ALGORITHM to fasten its working and more training will be evolved (machine learning).

998. VISUALIZATION OF ROOM

Project Advisor	MS. SADAF BALOCH
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Status	Completed
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Abstract Augmented reality is a technology that overlays digital information on objects or place in the real world for the purpose of enhancing the user experience. It is not virtual reality, that is, the technology that creates a totally digital or computer created environment. It shows that thing is near to reality and provide the virtual images which show in our environment and show that suitable place to adjust.

Augmented Reality (AR) is an interactive experience of a real world environment, where the objects that reside in the real world are enhanced by computer generated perceptual information, sometimes across multiplies sensory modalities, including visual, auditory, haptic and somatosensory. Project work on the 3D images placed in the room to how decorate it.

999. AUTOMATED WEB APPLICATION SECURITY SCANNER

Project Advisor	MS. SAHER ZIA
Status	Completed

In this project, we are creating an Automated Web Scanner which can detect vulnerabilities such as XSS, NMAP, SQL Injection, Rapid Scanner, Cross site scripting and Local/Remote file inclusion. We are trying to make a Web app which will detect these vulnerabilities by running a full scan according to the script and report back to the user. Vulnerability scanning is commonly considered to be the most efficient way to check your site against a huge list of known vulnerabilities - and identify potential weaknesses in the security of your applications. Vulnerability scanning can be used as part of a standalone assessment, or as part of a continuous overall security monitoring strategy.

1000. NETWORKIFY

Project Advisor	MS. SARAH JAVAID
Status	Completed

This project is based on Mobile Application. The significance of this project is that every technical and non-technical person like to have small tools in their pockets which helps them in many aspects rather than using big tools. Our problem is that, in production environment, if any problem arises than, they require machines and tools and if they have to check the vulnerabilities on daily basis or have a check and balance of infrastructure on daily basis, then, they need huge machines for those purposes.

So we will be providing a small pocket tool as we have in Kali Linux for the penetration testing of the infrastructure and other purposes. This will be a mobile Application based on Android, which allows its users to perform multiple functionalities with the help of just a click.

1001. MORTAL SOUL - THE GAME

Project Advisor	MS. SIDRA KHALID
Status	Completed

In this project we are focusing on developing a 2.5D isometric, action-adventure and strategy based game called 'MORTAL SOUL' with a modern developing approach.

Our idea is blend different genres and to fantasize the player in our own created world of dark souls. Our motive is to design a game for entrainment purpose but also to provoke one's train of thought and

improve critical thinking, strategy making and decision making as well as to amplify the leisure time our target audience of age 5 to 25.

The storyline of our project includes our protagonist named ‘Ezio’ who is a mortal soul and is captured in a dark world. He’s soul is captured by our main antagonist named ‘Soul Lord’. The protagonist has to save and free the soul which is in a lock-up in the last level. To get his soul back he has to defeat all the enemies and cross all the hurdles put up by the Soul Lord.

We have four different levels and each level will have a different narrative, theme, lightening schemes, and music. The user need different plan of actions and thought process to cross each level. To get to the next level the user needs to complete the prior level so that can open the door of the next level.

The player will experience sort of challenges and rivalries to end the game and achieve the goal. The user can also use power ups and special abilities to complete the levels.

In order to control the mechanics of the video game, we have applied Artificial Intelligence, Intelligent Agents, and modern 3D technology approaches such as 3Ds Max, Blender and Unity 3D Game Engine. Our eye appealing cartoonish graphics, environments, characters, and music will make it more interesting and give an immersive experience to the user.

The purpose of writing this documentation is to describe all the game features, the efficiency of the game, put the elements of interest, structure and implementation proem of the game.

1002. PAK WHEEL - CULTURAL RACE OF PAKISTAN

Project Advisor	MS. SIDRA KHALID
Status	Completed

Our project is to develop a Pakistan Cultural base 3-dimensional (3D) racing game (Pak Wheels) which will give user a complete visualization of cultural heritage. This will highlight the interest of user in playing and racing with other members on the roads and places they are familiar with of three different cities. We have 3 different stages/levels in our game. Stage1 is the Lahore map, stage2 is the Karachi map and stage3 is the Islamabad map. The player has to start from the starting stage (Lahore map) and struggle to reach the end stage of the game (Islamabad map) to win the game. We will have 3 different cities with each having different tracks and each city track will have 3 different levels of difficulty. For player to unlock next levels and cities, the player should win the previous race. After winning the race only then can player proceed to next level and after all 3 levels completion then player will be able to unlock the next city. The objective is to engage a normal user with the Pakistani culture along with playing a fun action racing game. The game will provide an immersive Graphic User Interface, and music and will aim to deliver good quality graphics so that the user will engage with the environment seamlessly. This is a non-violent game which can reduce the stress level of the user and have a sense of reward for good performance. Taking a beautiful car, you can't afford in reality for a scenic ride, to the places you can never be, can refresh you internally. This game is one of its kind as the cultural heritage of Pakistan will distinguish it from others.

F22-CS

1003. PAKLOOK-REVIEW WEBSITE

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	Completed

This is a crowd sourced local business review and social networking site. This site will help the customer to find the best service, whether it is a hospital or school or mechanic, on the bases of

reviews of customers and provide them the exact location. It will save their time and money. They will have access to all the things they want in a single website.

1004. SELF ORGANIZING REFLECTIVE NEURAL NETWORK FOR LIFELONG LEARNING

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

The project is based on the concept of Lifelong learning, also known as Incremental Learning and Continual Learning. The system will learn new information incrementally without forgetting previously learned information and through regularly reflecting upon previously learned information as well. Cognitive machines encounter data in a challenging environment and the data is dynamic. The data is an infinite stream and is non-stationary due to which these machines must adapt to drastic changes in input and retain previously learned information as well. Our proposed system will learn new information incrementally by preserving previously learned information and regularly reflecting upon the previously learned information as well. The algorithm uses Self-Organizing Increment Neural Network (SOINN) to learn data incrementally and uses a clustering algorithm based on Adaptive Resonance Theory(ART) and Grows When Required(GWR) to regularly reflect upon previously learned data. The results to be acquired from this project will demonstrate its performance in self-organizing the network, classification of data and regular reflection upon previously learned information.

1005. A DEEP LEARNING MODEL FOR PEDESTRIANS DETECTION WITH DANGER ESTIMATION

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

Robotic technologies are increasingly present in urban public spaces. For their safe movement in human living areas or sidewalks, researchers extract pedestrian features from images without considering those pedestrian characteristics that are very important to estimate the danger they pose. However, it is also important to estimate which person should be paid attention and assign priority order by the degree of danger for the Robot's collision avoidance. So we propose a deep neural model for pedestrian detection with danger estimation.

1006. TOURIST GUIDE APPLICATION

Project Advisor	DR. FARHAN DAWOOD
Status	Completed

The aim is to plan the implementation of a management system that seeks to improve the sustainability of tourism. An interactive map allows visitors to easily search your destination or attraction on their phone and navigate the grounds Add images, videos, audio, and written content to engage and educate your visitors and enrich their experience. Help tourists find nearby gems and attractions that will make their visit even more special, with alerts triggered by proximity to predefined locations. All assets created on Wish Trip include a button where visitors can instantly translate content into their phone's operating language (All known global languages supported).

1007. UCP RIDE

Project Advisor	MR. ABDUL JAMIL
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Status	Completed
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The wide usage of mobile technology nowadays has prompted scientists and researchers to use this technology to find workable answers for challenges that arise in daily life. The public transportation system is one of the biggest hurdles in our developing nations.

Public transportation is a necessity for the welfare of modern culture and has a significant impact on people's productivity, and consequently, on the entire process of economic development. In order to develop solutions that will work, various solutions have been examined.

One of the initiative options is "carpooling," which is centered on a group of people using a single shared car to commute daily to the same place. Additionally, carpooling is an effective way to get around the drawbacks of the traditional transportation system by taking shorter, more convenient, and environmentally beneficial automobile trips. This study introduces a smart carpooling mobile software for University of Central Punjab commuter students. The foundation of the proposed methodology is data mining, more especially the k-Nearest Neighbor (k-NN) technique.

1008. ZIGO

Project Advisor	MR. ANEES UR RAHMAN
Status	Completed

ZIGO is AI based property website. AI will generate ads according to user needs. This website is dealing with the renting and purchasing property. It generates custom ads using ETL and post it on ZIGO. It helps to market property faster and easier in short time. It will create ease for customer and seller to purchase, sell and rent property. We will collect data using ETL from different property websites, merge them and present collectively to understand market trends easily.

1009. DIGITAL BRAILLE SYSTEM FOR BLIND PERSONS

Project Advisor	MR. ANEES UR RAHMAN
Status	Completed

The World Health Organization (WHO) estimates that there are 284 million visually impaired people worldwide. People with visual impairments use the tactile Braille writing method, which is often written on embossed paper. The most significant method of education is reading. Reading in the context of those who are blind refers to braille reading through touch. The visually challenged find it challenging to access digital content or read electronic papers in today's digital world, where everything is done online. To solve this issue, we shall create a digital Braille system.

1010. CONSTRUCTION ERP

Project Advisor	MR. ANEES UR RAHMAN
Status	Completed

The problems faced in exciting software are as follow:

1. Material cost fluctuation
2. Project delay
3. Productivity issues
4. Communication gap between user and constructor
5. Organized payment plan

1011. HEPATOCELLULAR CARCINOMA ANALYSIS SUING DEEP LEARNING

Project Advisor	MR. ANEES UR RAHMAN
Status	Completed

Hepatocellular carcinoma (HCC) is among the leading causes of cancer incidence and death. Despite decades of research and development of new treatment options, the overall outcomes of patients with HCC continue to remain poor. There are areas of unmet need in risk prediction, early diagnosis, accurate prognostication, and individualized treatments for patients with HCC. Recent years have seen an explosive growth in the application of artificial intelligence (AI) technology in medical research, with the field of HCC being no exception. Among the various AI-based machine learning algorithms, deep learning algorithms are considered state-of-the-art techniques for handling and processing complex multimodal data ranging from routine clinical variables to high-resolution medical images. This project we will be a web application with artificial intelligence that will diagnose HCC efficiently and accurately , which will replicate the same jobs performed by human physicians. In this project we will gather data sets (ct scans)and then then the data will be processed and after that we will train the model And after that we will test the model. At last it will be able to take the images using api and show the results to the user.

1012. BLOCKCHAIN BASED DEGREE VERIFICATION SYSTEM (dApp)

Project Advisor	MR. ASIF FAROOQ
Status	Completed

Nowadays, a very crucial issue challenges us where the credentials, the degree and transcript of an individual go through quite a bit of scrutiny before they are verified due to the height of false/fraudulent credentials being manufactured by individuals every day. Such a task should not be as difficult as is the current practice. There is a dire need for a reform to take place where the individual may focus on more crucial aspects of their professional career instead of focusing on passing through the red-tapism to get their degree verified.

On the other hand, there is also a need for employers to verify the credentials of an individual directly instead of contacting the relevant authorities repeatedly.

Previously, this was implemented by using normal databases, but those systems fall victim to intrusions and fraudulent changes to the original credentials of an individual.

The need for a secure method to implement this system demands the use of blockchain to accomplish this task. Blockchain is a secure platform which with the use of smart contracts would ensure that the credentials entered have been verified by the authorities and no further verification is needed for the employer or for the individual.

Degrees and transcripts can be verified through such a system where the administration can enter the credentials of the individuals and the smart contract will be deployed on the TestNet which cannot be changed once deployed where it can be verified by employers or can be attached in the resume by the individual. Verification will be done by a web interface which will have different profiles for individuals, employers, and admins, each having a certain level of authority.

1013. HELL BLADE NINJA

Project Advisor	MR. ASIF FAROOQ
Status	Completed

Sword fighting will be the base of the game. This story revolves around Raion (Main Character Name) who fulfills the mission assigned by his master. In his way to fight, he unravels the truth about his life. The player will fight his way through enemies by either killing or casting magic on them. Enemies will be AI based and will defend themselves by the designed AI. We will use Unity Engine to design and develop the game. The language we are going to use will be C# and the platform to design our models will be Blender.

1014. PRODUCT WARRANTY VERIFICATION USING BLOCKCHAIN

Project Advisor	MR. ASIF FAROOQ
Status	Completed

Markets are permeated with fake products. Customers have no digital authenticating system to ensure the originality of a product and no digital mechanism to claim a warranty if the receipt is lost. Blockchain is a new emerging technology that can be used to make smart contracts on Solidity language to solve these problems. A web application will be developed having individual interfaces for the manufacturer, seller, and buyer each. At the time of purchasing the product, the customer/buyer can use his interface and verify the product using a unique code to ensure originality and the seller can enter the date when the product is being sold so that a warranty claim can also be done using that if required.

1015. IMECHANIC

Project Advisor	MR. ASIF FAROOQ
Status	Completed

iMechanic is an application that provides you with all car-related services with a single touch. These services include:

- Car repairing
- Car wash
- Car detailing
- Car maintenance

These services are available at your doorstep. Only a car repair service is provided on the road, plus at your doorstep. Furthermore, you can also pre-book a service.

1016. UCP META

Project Advisor	MR. ASIF FAROOQ
Status	Completed

The idea of this project is to make a METAVERSE of the UCP campus i.e. building A and B. We will virtually model blocks A and B block along with the courtyard and it would be implemented with the help of VR Box and mobile. It would contain a tour and some competitive games.

The user enters a tour mode and then explores the campus of UCP. There will be activities such as swimming, table tennis, tug of war etc. Some campus activities such as taking cash out of the ATM is also included.

1017. HEROS 3D SWORDPLAY

Project Advisor	MR. ASIM RAZA
Status	Completed

A young hero comes down from the mountains to save China from drug lords, smugglers, and goons alongside with his two friends he met along the way. The game revolves around two martial art clans namely the Sixth-Half and the Sunset Drizzle. In order to protect martial world and commoners he seeks to kill Prime Minister Cai who was actually the mastermind behind all terrorism. As time passes, he trains himself and sooner an inexperienced young man grows into a splendid “hero”. But unfortunately, his friends become rival of one another and he has to fight with them also. In sum, the proposed multiplayer game is based on the Chinese novel "Shuo Ying Xiong Shei Shi Ying Xiong" written by Wen Rui An Our problem is to design a 3D game based on this story. This game is meant to be multiplayer alongside AI. In this regard, selection appropriation is required such as an AI based opponent to fight with the hero and/or two or more human players to fight with one another.

1018. FREE FLOW LEARNING (FFL)

Project Advisor	MR. ASIM RAZA
Status	Completed

VR is widely being used now a days and it'll only be a matter of time before VR is implemented in the Education field as well. The problem with learning is that a student cannot visualize properly what's available on the book pages. To solve this problem, Free Flow Learning grants a user a virtual environment where they are presented with topics that are visually dissected depending on the user's action. Hence making it easier to learn and improve their knowledge while having fun. We are working on improving the education system for the betterment of student's future. It will help in the early and the more technical field of studies. Providing visuals to a topic will help a student improve their interaction skills with the technologies available in today's market.

1019. CULTURAL 3D BULL RACE

Project Advisor	MR. ASIM RAZA
Status	Completed

As the game is based on our culture, so the main problem is to design the 3d cultural environment which has the proper atmosphere of a village. Creation of skyboxes is also time-consuming problem. As the game is competition based, so introduction of Artificial Intelligence in the game is also a great task. The control will be based on new input system using unity. Creating audience across the whole tracks is worth considering, along with Bulls and bull carts. There will be a destination line and the bull which reaches first at that line will win by collecting different type of power-ups in the track i.e., time, health, and speed.

1020. CLASSIFICATION OF RESPIRATORY SOUNDS

Project Advisor	MR. AWAIS M. LODHI
Status	Completed

1021. OFFLINE SIGNATURE VERIFICATION SYSTEM

Project Advisor	MR. AWAIS M. LODHI
Status	Completed

This project aims to assist organizations in identification of original signatures of a person to avoid forgery using a Desktop based application having a trained model with deep learning (neural networks) and image processing algorithms implemented. Present autonomous signature verification systems are based on live identification of signature based on the pressure at pen tip and its movement between X and Y coordinates which is termed as online SVS and can only be beneficial during live signature verification. However, many organizations need to verify signatures several times, so online signature verification cannot be used everywhere since it requires real time signatures. To overcome this issue Offline signature verification system is needed so that signatures can be verified anytime, when needed, merely with the help of signature image. A modified version of traditional twin Siamese network i.e., 5 ways Siamese network will be used wherein 4 genuine signature images and one test image will be inputted and decision of the authenticity of image will be based upon the similarity between test image and 4 genuine images, once the model is completed the results will be compared with existing models which compares 1 genuine image with test image.

1022. AUTOMOBILE CLASSIFICATION (EYE ON AUTOMOBILE)

Project Advisor	MR. AWAIS M. LODHI
Status	Completed

There is no Automated car type classifier available at toll taxes areas. Therefore, we are developing an efficient application that makes ease by identifying vehicle model, manufacturing year and color. We have a dataset of approximately one million (936051 images of 55527 vehicles from 400 models) vehicles to help machines learn the model, manufacturing year and color of each vehicle. Furthermore, the dataset currently does not have the color information for the vehicles. By using this dataset and other AI techniques, we will help the machines to learn the make model, manufacturing year and color of each vehicle. By using the vehicle color classification technique for classifying vehicles into seven categories under different lighting conditions via colour correction. One major problem in vehicle colour classification is that for any given colour, there may exist many shade colors: For example, shades of white (Pearl, Alabaster, Snow, Ivory, etc) and shades of black (Charcoal, Midnight, Ebony, Onyx, etc). Traditional methods cannot classify vehicles with shade colors because a wrong classifier is designed by putting vehicles with the same label together even though their chromatic attributes are different. The separation can significantly improve the accuracy of vehicle color classification even if vehicles are with various shade colors and captured under different lighting conditions.

1023. PETS WORLD

Project Advisor	MR. DANIYAL AHMED
Status	Completed

Pets World is a web application where users can make profiles for their pets, and it will guide them when their pets require a vaccine or can book a vet appointment if they get ill. Pet's world provides services like Health care, Day care. Online store for buying pet food and accessories etc. We are also providing health insurance for pets first time in Pakistan.

1024. VIRTUAL SHOW ROOM FOR VEHICLES (VSRV)

Project Advisor	MR. DANIYAL AHMED
Status	Completed

It's a Web/Mobile based Application software that will allow the users to modify His or Her car using our application. The application will allow the Users to add / remove and modify the components of

their cars. Such as by choosing from the availability of a variety of Rims, Tires, Headlights, Tail lights, Spoilers and other modifiable products virtually by just scrolling and tapping on the product they want to add on their vehicle. Despite all, the users would be acknowledged by the details of the products they are adding on their cars. Details will also include Price details, Brand name of the products and all in all at the end users can save the screenshot of their modified cars which will eventually help them with the idea of how they want the final look of their car. It's a user-friendly application that allows the users to achieve their vision/goal about how they want to make their car look. One of the biggest problems that people have to face is the availability and purchasing of the spare parts of vehicles. In the market the users can not try out any accessory on their car unless they purchase it. The second problem that users have to face is they are unsure about how their car would look once they make certain changes i.e. changing the accessories/modifying their specific car. The third problem that users usually get in trouble is with the right pricing of the available products in the market. The fourth problem is that users are doubtful when it comes to the reliability and the authenticity of the available accessory/product. A user-friendly web/mobile based application that allows the user to modify their vehicle virtually at home. This will save the precious time of the user and will also help users to get acknowledged by the availability of the aftermarket products available in the market for their car. The application will also help them to learn about the whereabouts and the current state of the market along with the prices and they will be able to purchase the available accessories after previewing it on their vehicle. This will eventually help them in achieving their goal/vision that they have set in their mind regarding the modification of their car.

1025. CLASSIFICATION OF CYTOKINE USING MACHINE LEARNING

Project Advisor	MR. DANIYAL AHMED
Status	Completed

Input: We would give protein sequence (Chemical formula) through amino acids in the form of string.

Output: We make a web portal to display result

Summary: Suppose we have protein sequence of 400 length. Then we convert it into 41 length, 20 length before modified residue and 20 after modified residue. Then we apply kahn's moment, identity matrix and other statistical matrix. Then we get the feature vector in which there will be positive and negative data. Then we add a column in a table on excel sheet for labelling the data, if another protein has the same modified residue but if it is not a cytokine it will be added to the negative data and vice versa.

Then we apply models k-mean, k-fold validation and etc. Then we test to calculate accuracy, sensitivity, f1 scope and if the result is satisfactory then it will be displayed on the web portal otherwise, we will fine tune the model.

1026. ECO PAK

Project Advisor	MR. DANIYAL AHMED
Status	Completed

1027. OLD AGE HOME PLATFORM

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Completed

The last century has witnessed a rapid increase in the population of the elderly people in the developed and industrialized countries. This phenomenon is not restricted to the western world only, but many countries such as ours are now feeling the impact of this transaction. This situation could be attributed to a combination of factors such as increase in age, longevity and decreased death rates due to advancement in the field of medicine, improvement of life expectancy at birth, and enhancement in the average span of life. Pakistan ranks 12th in terms of absolute size of elderly population. The country is not adequately equipped to look after their special health needs and the changing traditional value system. A feeling is now growing among the aged persons that the attitude of the younger generation towards them is not as desired.

The data was collected using a specially designed Interview schedule and observation technique through a house- to-house survey for those residing in the families. Non-working status of these women and above 60 years of age was criteria for sample selection. Results of the study revealed that most of the elderly felt the attitude of the younger generation is unsatisfactory towards them especially those who were in old age homes in terms of getting respect, love and affection from the family members instead they were considered as burden for others. Women living in the families had a positive attitude towards old age. The social relationship of the elderly women living in families and those living in old age home also differed.

Old Age Home Platform is a web application that provides an end-to-end smart web application for old age people and old age homes. In this platform firstly, we will create a Chatbot which will answer the users some of their FAQs. This platform will provide the login credentials to all the siblings/ child of the old age home users so they can check their health and food diet on daily basis. With this platform they can also check whether their forefather/ guardian is critically ill or needs visit. In this platform we will add e-commerce functionality so if anyone want to donate, they can donate as well. As this is not for single old age home so in this project, we will target all the old age home of Lahore.

1028. HSM-E-SPORTS TOURNAMENT ORGANIZER

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Completed

E-Sports is a form of competition using video games. People play video games to compete against other players around the world. The most common way to accomplish this is over the internet. E-sports is a billion dollar industry. The experience is similar to watching a professional sporting event except that instead of watching a physical event, spectators watch video gamers compete against each other in a virtual environment. E -Sports describes the world of competitive and organized video gaming. Competitors from different leagues or teams face off against each other. Fortnite, PUBG, Apex Legends League of Legends, Counter-Strike, and Call of Duty to name a few. These gamers are watched and followed by millions of fans all over the world who attend live events or tune in on TV or online.

Whenever online gaming tournaments are held, they are held manually. By that what we mean is normally there aren't many platforms where teams can register themselves and have a record of their payments of fee. This creates security and integrity issues. Manual communication is not solid or consistent. Miscommunication can cause the respective teams problems such as there could be misinterpretation of the timing schedules or issues regarding the opponent teams.

Our proposed platform would be helpful for players to play online tournaments or matches easily without any issues. Players will easily register themselves for the matches or tournaments after submitting the registration fee. Registration fee will be paid through payment gateways. After complete registration, players will be given a dashboard, from that dashboard players or teams will be able to see the schedules of their upcoming matches, points table, winning cash amount, profiles of

opponent team members etc. While playing the tournaments, teams will be able to share the live stream of their matches using our platform. Teams can win the matches as well as win the extra cash and will be able to withdraw that cash from their accounts, and they'll also have the luxury of buying something from our store using that winning prize.

1029. HOSTELITES

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Completed

Our project is to create a community web application for bachelors/hostelites specifically. This web application will be consist of hostel listings. As a student, we have been facing issues in finding a suitable accommodation for ourselves for past 3 years. Since there are hostels or other options listed on websites like zameen.com but most of them are just for the advertisement of the property dealers. The pictures they attached are not even reals sometimes. But If you find a good option the prices are double for the bachelors. And if we talk about the hostels, So, we thought what if we ask about the insights from the people already living in that particular hostel. So we decided to make a web application that solve this particular problem of bachelors. By using this platform they will find a suitable accommodation according to their own and reserve their seat in a particular hostel they want to live. They even get in touch with their fellow hostelites and seek help.

For making web application hostelites we are using MERN stack frameworks. In which we will use React.js, Node.js, Express.js and Mysql as the database. We will also develop a cross platform application base on React Native. We will use escrow system for online payments so students can reserve their seat without any fear of fraud. Initially this application will be used as an redirection application to redirect the user to our website using a QR code scanner. The user then sign up and use the application to find the hostel or to list the property.

1030. UNIVERSITY FINDER

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Completed

Searching for the best and approved universities and hostels (for outsiders) is a big problem for the students after intermediate. Proper guidance and information of all the things is essential for a student to make their decision. Providing a Web Platform for all the things make it easy for the students to identify university with best residential places and routes with public transport. Using advanced web techniques and tools for the development is a challenge. After the completion of this project, we as students will enhance our web development skills according to the current market standards and helping our upcoming generation in their search of best educational places.

1031. E-LAUNDRY

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Completed

The summary of this project is that you are creating an e-laundry web portal, which is a website that allows customers to order and pay for laundry services online. The project involves determining the scope and objectives of the website, choosing a domain name and hosting service, designing and building the website, setting up a system for accepting and processing orders, and promoting the website to attract customers. The goal of the project is to create a user-friendly and convenient platform for customers to access laundry services, and to build a successful e-laundry business.

1032. SAFEX

Project Advisor	MR. FARAZ ALI
Status	Completed

Currently the system is only available for high crime areas and not available in Pakistan. Only UK China and UAE use this system but in real time environment like Riots only drone mobile camera CCTV can work. That is why we create the mobile based detection system. OpenCV is an open-source library that is used to recognize face in AI. Recently, Apple company built a new technology to recognize a person face if he wears a mask. This technology used in IPHONE 12 and the software version is IOS 14.5 Beta 1. Face Detection Technique, popularly known as Haar Cascades. It will detect the person face from the image. If this algorithm is not able to detect, then the approach of machine learning is used having model CNN to identify the person after training model of different datasets.

1033. NATIONAL RECRUITMENT TESTING SERVICE

Project Advisor	MR. FARAZ ALI
Status	Completed

National Recruitment Testing Service will provide specialized testing services all around Pakistan for the recruitment of software engineers. These services will be divided into two major parts. Services for Software Houses as a recruiter

Services for Individuals as candidates. This will help to save time and money, and minimize the processing time and the hassle of individual recruitment.

1034. EYEWEAR TRYON APPLICATION USING AUGMENTED REALITY

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

A mobile application built in flutter using dart to recommend eyewear to the user according to their face shape using Google's AR Core. We aim to eliminate the travel time to a store to purchase a set of glasses. Moreover, the application will also provide the user with a library of glasses to choose from if the user does not like the pair of glasses recommended by the algorithm.

1035. VIDEO CALLING APPLICATION WITH AVATAR MAPPED ON FACE MOTION TRACKING

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

The Proposed web application will enable its users to video call random strangers all around the world on the internet without their privacy being invaded and that is by using their avatars instead of their real faces. The user will still be able to convey his emotions as the avatar will be mapped on the basis of the user's facial motion. People can end video chat with anyone if they feel their vibe is not matching. Also, User's personal information such as email or phone no will not be disclosed to anyone. These features differentiate this application from the applications available commercially or freely over the internet.

1036. PROPHECY BLOCKCHAIN BASED PREDICTION PLATFORM

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

Currently the markets are full of blockchain prediction platforms. It is an exponentially growing market however, not everyone has the expertise to fully dive in and explore the niche of virtual assets. On the Prophecy platform, customers will be able to engage using our PRC tokens. On the Prophecy platform users will be able to predict crypto currencies based upon hourly, weekly and monthly prices. Based on the accuracy of those predictions' users will be rewarded accordingly. Smart contracts will be implemented for the predictions along with a web app where the user base will explore the platform.

1037. CAB POOL DAPP

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

This Project is basically based on Block chain, We are basically creating a mobile based application that will be much like InDrive (Cab booking app) but there is a twist, we are going to make it a decentralized Cab Booking App by implementing it using block chain, we are going to remove the payment methods of cash and banks and instead we are going to implement the payment system through crypto currency and we will make our own token for the payment gateway. There will be a mobile application that would consist of three modules i.e. Admin, Driver, User.

1038. CLOTHS SALE AND PRODUCTS SUGGESTION BROWSER EXTENSION

Project Advisor	MR. FARRUKH EHSAN
Status	Completed

The Proposed web browser extension will enable people to search for products on sale available on Pakistani cloths brands. Our browser extension will allow users to find and search for best possible sale available on the products and also suggest them similar products by using machine learning. A user can enter the required product details through multiple options available in the extension and related products will be shown to him/her or, a user is looking at a product it will be automatically detected and sale on same or similar products will be shown to him/her in the extension. It will also allow the users to use the web app for payment integration, wallet system and order tracking system.

1039. LET'S CONSTRUCT

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

Construction is one of the big scopes of market in present days. And for all it's not an easy thing to avail this facility easily or comfortably. For availing the things and men related to work people travels and searches a lot. To start a project related to construction all we needs a structural idea of the building how it going to look alike and for that architects gives a map. In this project we are going to design a platform from where anyone can avail men, material, estimation, and dimensional map of the building depending upon the size and area.

1040. 3D ROOM RENOVATION AND COST ESTIMATION

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

On the majority of renovating websites, they provide virtual elements for anyone to install in rooms, but they do not provide us with the size of the object, which could present us with numerous issues when we do install it in the room. Something that is displayed during room décor is custom-made. Therefore, inform everyone about the tailored to fit that are not available in stores. We occasionally have extra items in our rooms that are unnecessary. Therefore, we must sell them. Our website will offer the option of bartering and even the way to expand or buy the object.

1041. FOOT ULCER DETECTOR

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

Diabetic Foot Ulcer (DFU) is a wound caused on the foot to patients suffering from diabetes. If not treated promptly, it affects the lower extremities and frequently results in the amputation of a limb. It is <S25BS005>

a time-consuming and costly treatment as carelessness in its treatment can cause the death of the patient. So we have to take this type of illness very seriously. As most of the patients cannot afford the checkups and further treatments for this we are going to develop a system that will use to detect foot ulcers and reduce the time and cost of a regular checkup. We will develop a mobile application that will scan the image, remove its background, extract features and then implement CNN for the segmentation and as a resultant we come to know about the condition of the foot. Basically, the application will have a server that will handle the dataset and training of the model. The application will get the image, perform data augmentation, extract features using the context aware approach and then send the results to the server. The server then adds the image in the existing dataset and then retrained the model automatically and then update the device. This application that will help to detect the foot ulcer will be known as a Foot Ulcer Detector.

1042. CODE SNIPPER

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

The main application of the internet that arose during Covid-19 is online learning. Students these days learn most of their courses online and this is especially true for Computer Science students who learn coding through online videos. A major obstacle they face is that they must manually write down every code they go through in a video as it is not commonly available. With Code Snipper, we are looking forward to solving this problem. Starting with an OCR engine, we will model an AI to recognize languages based on their syntax. It will then translate all the code into a text form and then using the recognized language, it will autocomplete the code by adding statement terminators and proper indentation to the code. The text will then be copied to clipboard.

1043. TALE OF REVENGE

Project Advisor	MR. IRFAN ANJUM
Status	Completed

Video games have become an important part of our culture in a relatively short time. The industry is also developing into a major pillar of many solutions to modern problems. With game development, we can provide many solutions such as stress relaxation, entertainment and many more.

As we are also developing a game which contains a story of revenge of father and husband as he fights the zombies throughout the game. Zombies came into existence by a virus and killed his family and others now he is after the person who is the responsible for this virus outbreak. The final Product will be a fully playable game that contains lots of features and 4 to 5 levels every level will have a different environment and weather with different objectives for the player. There will be lots of visual effects and sound effects players can use keyboard and mouse or the gamepad for playing the game totally depends on player. For this project we should have the knowledge of C++ basics, object programming, unreal engine and Photoshop.

1044. AI SMART GLASSES FOR BLIND

Project Advisor	MR. IRFAN ANJUM
Status	Completed

These “AI Smart Glasses” are designed to help the blind people to recognize faces and read the text from an image. These kinds of inventions consider a solution to motivate blind person to complete their daily life tasks despite all their difficulties. Its main objective is to develop a new way of reading

texts for blind people and facilitate their communication. The first task of the glasses is to scan any text image and convert it into audio text, so the person will listen to the audio through a headphone that's connected to the glasses. The second task is to recognize face by pressing a button that is connected to the glasses as well. The glasses used many technologies to perform its tasks which are OCR. Detecting the text in the image was done using the OpenCV and Optical Character Recognition technology (OCR) with Tesseract and Efficient and Accurate Scene Text Detector (EAST). In order to convert the text into speech, it used Text to Speech technology. Face detection is performed by using **classifiers** by capturing the picture using the button.

1045. PROGRAMADOR RECOUNTER

Project Advisor	MR. IRFAN ANJUM
Status	Completed

A smart scheduler website that will find the optimal date sheet according to the given requirements. It will also send a detailed reminder to everyone so that no one misses the exam. During the scheduling process, many constraints should be considered. Scheduling will be done in such a way that the students of the same course will not be able to sit together so that plagiarism can be avoided. Also, students won't be having 3 consecutive exams in a day. Students and teachers can easily see their duties and exams from the scheduled date sheet.

1046. BITCOIN PRICE PREDICTION USING MACHINE LEARNING

Project Advisor	MR. IRFAN ANJUM
Status	Completed

Cryptocurrency is a digital form of money. It is a digital currency thus it does not exist in physical form or hard notes. There are many digital currencies such as bitcoin, Ethereum, Ripple, Ethereum Classic, Solana, etc. Our study is especially focused on the most well-known cryptocurrency, i.e. bitcoin. With time the world is shifting to digital technologies. Cryptocurrencies play an important role in the digital economy in advanced countries. In recent years cryptocurrency took a boom in price. The value of bitcoin as an investment asset has been rising. Its highly volatile character necessitates the need for accurate forecasts upon which to base investment choices. For precise prediction machine learning play an important role in bitcoin price prediction. Our goal is to apply efficient prediction models based on machine learning, specifically Time Series Based and Multivariate Autoregressive algorithms to predict the fluctuation of bitcoin price and to obtain maximum accuracy. The bitcoin price is majorly based on the factors which we have selected for our study. These factors cover all the aspects of bitcoin, including trading, mining, and sentiment.

BTC Prediction can be implemented using various algorithms like computer vision, machine learning/deep learning, and deep neural networks. But deep learning in general has achieved high validation accuracies. So, based on our research we will be using Deep Learning for our project and Python computer language along with some Image Processing techniques. Following are the different stages that we will go through to complete this project.

1. Data Set
2. Implementation of Algorithms
3. Deep Learning Model (Training & Testing)
4. Integration of Model into Web Application

1047. GREAT BEGINNINGS

Project Advisor	MR. IRFAN ANJUM
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Status	Completed
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In our country booking a place for your event can be very inefficient. You have to visit different locations hence consuming your precious time, costing you a lot only for the selection of your event location. You have to visit different vendors for different services i.e. Transportation, Bridal Makeup, Photographers and Decorations. Bigger problem is to find good organizers. We are going to create a platform that has listings of Events Complex of all major cities of Pakistan as well as the tourist destinations. For events user will be able to book an event far away from your home without visiting the location. User will be able to choose his menu, decoration, staff, and seating plan. We will make a Web Application where the user able to register himself and the service providers as well. We will add reviews and rating system in our project and using sentimental analysis through machine learning we will rank the services providers. From different sources we will do data extraction to extract meaning full data like rating, reviews and info etc. Platform itself will recommend you best service provider according to your needs. For businesses they will be able to register themselves and their services for customers. This will help businesses to get more traffic and grow especially for new businesses who want to visitors and shoppers mainly so customers will be able to get a view of services they provide and based on their ratings and reviews they will be able to decide which one is best for them.

1048. THINK AND GET

Project Advisor	MR. JAWAD HASSAN
Status	Completed

E-commerce is a business where if you set it up right, it will grow on its own. The Web is truly a global marketplace where every store is open 24-hours a day and 7- days a week. Word of mouth may be fast, but it is not nearly as fast as word on the web. Good, reliable, trustworthy customer service is exceedingly important for the online retailer since with the tap of a few keys, consumers can make or break the reputation of an online store. Low price and convenience are great. You can also review and compare the products. A trend in most major e-businesses is their creation of interactive websites that provide platforms for virtual communities and personalization.

1049. PAK DENTAL CARE

Project Advisor	MR. JAWAD HASSAN
Status	Completed

We are making a complete clinical management system. It is a multiuser web application using HTML, CSS, BOOTSTRAP, REACT JS and DJANGO. It is an ERP system which provides solution to various clinical problems such as repetitive time-consuming tasks to be automated, manage business activities, manage patients and doctors, online appointments, Dental clinical resource management, ratings and reviews, E-charting, location preferences, records can be download at anywhere anytime and a lot more this system will be used by clinical Administrators, Receptionists, patients, and doctors.

1050. THE PSYCHIATRIST (A REAL-TIME SENTIMENT ANALYSIS OF TWEETS ON TWITTER)

Project Advisor	MR. JAWAD HASSAN
Status	Completed

The World is evolving, and so are the diseases Humans face, among these the disease of Depression is showing threatening rising scales. More than half of the world now uses social media. Twitter is the

largest social media platform and has enabled its users to express their emotions and thoughts by providing a safe space to them. This project will practice the applications of Sentimental Analysis, National Language Processing, and other AI and ML related to achieving the end product. This is to secure the users from the deadly state of Depression by analyzing the tweets and scaling them to certain levels, the system will also generate alert texts to convince connections to help the users improve their mental health state.

1051. RECRUIT RIGHT

Project Advisor	MR. JAWAD HASSAN
Status	Completed

One of the most important and crucial tasks for any company is to hire an ideal candidate for their job role. The traditional methods normally entail a time-consuming process of manually looking through all of the individuals who have applied, examining their resumes, and then establishing a shortlist of prospects who should be interviewed. Companies receive a large number of resumes/RESUME's, many of which are not well-structured. The process of picking a candidate based on their resume, on the other hand, has not been completely automated. Our website will be a platform where the applicant will upload resume in pdf format. We will be using Natural Language Processing to extract relevant information like skills and work experience from the unstructured resumes. The best suitable candidate will be ranked accordingly by our model.

1052. VIRTUAL TRY ON

Project Advisor	MR. JAWAD HASSAN
Status	Completed

As we know that the world is moving towards online shopping. People buy many products, accessories, clothes online but many people hesitate to buy online accessories and go through the hustle of going market. So, we are making a software which we will be linking it with a website. In this website there will be different products and you can select any of them. The software which we will be developing will detect your body part and place the select product on that part of your body. All of this will be displaying on your screen.

1053. AUTOMATIC HEAD COUNT AND ATTENDANCE

Project Advisor	MR. M. AMMAR HASSAN
Status	Completed

Till now the known traditional attendance systems are online portal attendance or hard copy call out system. These attendance systems are very much time wasting. Teachers as well as Students may face many problems while roll calling. Most probably Students may call the proxy of other Students. Teacher may mark incorrectly without paying attention. Traditional call out system takes at least 5 to 10 minutes which is too much in a sixty minutes lecture. Teachers also have to take the attendance twice to confirm that they have marked the attendance correctly. In most of the cases Teachers take attendance at the start of lecture which causes trouble for the Students who join the class after attendance. For those Students Teachers have to take attendance again which cause disturbance for the whole class by breaking the rhythm of class. The Students who have completed their leave quota and are just an absent away from course withdrawals are always in danger to be withdrawn by the Teachers unintentionally by a slight mistake of Teachers. On the other hand, the Teachers too remain in danger of marking attendance incorrectly. So, they have to take attendance with their full focus. In this

procedure more time is required than expected. If the Teachers take attendance online by their portal, then firstly, they have to login to their systems and then their portals which also take much time and sometime more than expected due to low internet or portal faults. So, the traditional system either online or register attendance are only a time wasting systems.

1054. CURRENCY DETECTION FOR VISUALLY IMPAIRED PEOPLE

Project Advisor	MR. M. AMMAR HASSAN
Status	Completed

For a lot of applications, the capacity to recognize money bills without human input is disadvantageous. Probably the most crucial is helping those who are blind. We are a representative of an app that recognizes currencies and sends results via audio. The inability to distinguish between different paper currencies due to approximate differences in paper size and texture and forgery is one of the main issues faced by people with visual impairments. Therefore, this system's function is to create a solution to this problem so that blind people can feel secure and determined in their financial approach. For users who are visually impaired, it is believed that they will be able to take a picture of any section of the currency with their phone, let the system recognize it, and receive a value notification. The identification of Pakistani, Saudi and Turkish currency is trained in this study using very basic image processing tools, which reduces processing time while maintaining legal authority. The current systems can manage limited amounts of currency and contrast lighting conditions.

1055. COURT MANAGEMENT SYSTEM

Project Advisor	MR. M. AMMAR HASSAN
Status	Completed

Access to justice has become an important issue in many justice systems around the world. Increasingly, technology is seen as a potential facilitator of access to justice, particularly in terms of improving justice sector efficiency. The major functionalities covered in court works are registration, indexing and follow up of cases. Case management is the key success factor in judicial system. Systematic, efficient and organized case management system provides comprehensive information for courts to guarantee unbiased decision and transparency information system to hinder the misuse of power or corruption, case postponement and delays in decision making. It also reflects the good image in judiciary.

The Court Case Management System is primarily engrossed on managing Case Registration, Court Types, Courts, Counsels, Fees, Counsel Fees, Case Positions, Damages, Documents & Cost Analysis Reporting Furthermore it will enhance the management of Case Appearances, Case Parties, Payment, Upload Scanning Documents & etc. The Court Case Management System will be backed by a web server with Apache, PHP & MY SQL. It is anticipated to be a highly user-friendly system in which the users will be guided throughout the whole process. The rationale of Court Case Management System is to "simplify the complications of Court Case Management by the use of Information & Communication Technologies". The reporting features of Court Case Management System can be used to make & initiate decisions regarding the Court Cases by the management. This key rationale of system will be used in the utmost effort to accomplish the corporate objectives & goals. It will also provide a communication framework for the company with the convergence of mobile & internet technologies like Email which can be used to provide a better solution for the communication problems within the company with more efficiency. The 21st century has witnessed so many great inventions in science and technology that have led with great potential to solve existing problems.

1056. TRAVELMATE SAAS APPLICATION

Project Advisor	MR. M. USMAN AFZAL
Status	Completed

1057. S BOT: SORTING ROBOTIC SYSTEM (EXTENSION OF TURTLE BOT SYSTEM)

Project Advisor	MR. M. ZAMAN AZIZ
Status	Completed

Waste management and sorting are crucial tasks to make the environment green and to ensure better (re)use of the resources. Some countries, because of their high-density population, are facing enormous challenges to manage huge amounts of waste produced every day. The purpose of this paper is to use the advancement of Information and Communication technology (ICT) to improve the waste management system and make lives better by providing a smarter way for waste sorting and management. In this paper, an intelligent system was proposed and developed for automatically sorting the waste to be used in context. The aim of the project is to design a viper system which will separate the valuable objects safely and throw the trash in a bin or a garbage can. This paper presents an AI (artificial intelligence) based sorting robotic arm that is used for automation processes.

1058. GOOGLE OF BLOCK CHAINS

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

As world wide web is undergoing another transformation and blockchain and DLT(Distributed Ledger Technology) is moving the world towards decentralization, At the same time , Web3 space is facing a problem of growing demand for a ways to quickly access information stored on different blockchains this is the problem we aim to solve for the end users with little to no tech background and they can come to our website which allows users to find on-chain information about any smart contract easily without having to search through an entire database.

1059. APPLICATION OF ISLAMIC MUSHARAKA THROUGH BLOCKCHAIN

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

In Islamic banking purely Musharakah concept is not implemented yet so here we propose a conceptual Musharakah model that uses Blockchain. Musharakah is a kind of collaboration where two or more than two people combine their assets in order to enjoy similar rights. There will be multiple pools where people can invest and can track their records. Each pool will be considered as two or more people agreeing on a single contract and that one single contract will be represented as a single pool. Also, each pool will be consisting of investors and as well as the voters where voters will be playing role to vote as **Salis**, and these voters will be the person from members of board and Salis in a term is said as if there are equal number of voters and there is possibility to get equal votes so what voter does here is that he puts his vote in the term for yes or no. Further, receiving the profits will be equally divided among the investors according to the percentage of their investment and same as the case for loss in case. Any investor can change his/her profit into investment again or can withdraw his/her investment along with the profit.

1060. AUTOMATIC VIDEO DUBBING APPLICATION

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

This project demonstrates how to use a text-to-speech (TTS) service and the open-source program FFmpeg to translate a video file's audio from English to Urdu. The input video file is first processed to extract the audio, which is then converted to Urdu using the TTS service. The converted audio is then merged with the original video file to create an output file with the audio in Urdu. The resulting video file is then made available for download to the user. The project demonstrates the effectiveness of using FFmpeg and TTS technology to convert video audio to different languages, and it has potential applications in a variety of settings where video language translation is needed.

1061. FITNESS PRO-WORKOUT AND BUILD MUSCLES

Project Advisor	MR. MUHAMMAD AZEEM
Status	Completed

Fitness pro is a machine learning based application. It is a multi-user mobile application. It provides an easy and user-friendly competitive platform to help the user to keep himself/herself healthy by staying at home. The functionalities of this application are: body measurements, providing exercises, user data, daily reminders, application reviews and ratings, body category/type, systemic alerts, exercise videos according to the user body type, workout timing management, detailed measurements of body, home workout videos etc. In this app, user can easily carry on his fitness journey by the exercises which will be provided by fitness pro. Feature of body measurements using picture will be used. This will be very helpful for the user to have complete schedule by just using this application.

1062. ANIME WAR

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	Completed

1063. MURA CLASSIFICATION, ABNORMALITY DETECTION IN MUSCULOSKELETAL RADIOGRAPHS

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	Completed

Musculoskeletal conditions will increase as the population of the world ages [1]. For radiologists to obtain second opinions and to facilitate cases where radiologists are not available, an automated system capable of analyzing x-ray images is necessary. By using deep learning techniques and the MURA dataset, this project intends to serve this need by binary classifying X-ray images as normal or abnormal. The MURA (Musculoskeletal Radiographs) dataset classification is a project undertaken by researchers to develop algorithms for the automated classification of musculoskeletal radiographs. The images are organized into seven body parts (shoulder, elbow, wrist, hand, finger, ankle, and foot). The goal of the project is to develop algorithms that can accurately classify specific body parts as normal or abnormal. To achieve this, the researchers are using a deep learning model based on convolutional neural networks (CNNs). The CNNs are trained on a number of different images in order to learn the

features of each body part, and the model is then tested on the MURA dataset. Results show that the model is able to accurately predict the normal or abnormal classification of radiographs with an accuracy of over 80%. This project is an important step forward in the development of automated medical diagnostics, and could potentially reduce the need for manual interpretation of medical images.

1064. BARAF PAANI

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	Completed

Baraf Paani is a popular game in Pakistan that has been adapted into a 3D video game format for play on personal computers. In this game, players take on the roles of either catcher or runner in a virtual environment, using the controls of their computer to move around and interact with the game world. As in the traditional game, the runners try to avoid being catches or frozen/"Baraf" by the catcher and help their fellow runners that have been frozen, while the catcher tries to catch/"Baraf" all the runner before the time limit expires. In the 3D version of the game, players can move freely around the virtual environment, which will include a variety of different locations and environments such as Minar-e-Pakistan, village, etc.

The 3D version of Baraf Paani includes an additional gameplay element, such as power-ups that can be used by either the runner or the catcher to help them in their respective roles. Players can also choose their characters from character roaster and can also unlock new locations as they progress through the game.

Overall, the 3D version of Baraf Paani is a fun and immersive way to experience this classic game, offering players the opportunity to engage in strategic gameplay and use their creativity and problem-solving skills in a virtual environment.

1065. ANCIENT CHRONICLES: OPEN-WORLD MMO

Project Advisor	MR. MUSTAFA HASSAN
Status	Completed

Ancient Chronicles is an open world Massively Multiplayer Online (MMO) game that will support cross play between computer and console players. The game will support both first person and third person perspectives for the player to switch between at their convenience.

The game world will consist of multiple levels stacked upon each other like floors and each level will be a small world with its own theme. Each level will contain 2-3 towns. In these towns, there will be plains, jungles, deserts and other such environments that the player will have to go through in order to travel from one town to another. The areas between these towns will be challenging areas that will contain hostile monsters which will attack players as soon as they are noticed (by being seen or heard). Besides these monsters, players may encounter other players as well and they may fight each other without any restrictions. However, the towns will be safe heavens where no combatant will be permitted. Besides this, there will be a dungeon (a tower like structure) as well. This dungeon will be the pathway towards the next level and the players will have to clear the dungeon containing monsters. At the end of the dungeon will be a staircase guarded by a powerful boss like monster and the players will have to defeat it in order to climb the stairs to the next level.

A quest (missions) system will be implemented. Players may receive quests from Non-Player Characters (NPC) which they can complete to gain experience (EXP) points to level up. The tasks of the quests may be as simple as gathering items or as difficult as killing a certain number of monsters. Leveling up will increase the player's health, strength, stamina, speed etc. EXP may also be gained by killing monsters and completing certain achievements.

The combat system in this game will be strictly melee. Close quarters weapons like great swords, one-handed swords, hammers, lances, nodachis and katanas etc. will be available and the player may freely choose their weapon of choice. Unlike other MMOs, there will be no class system in this game. Instead, there will be a proficiency based system that will give the players the freedom they want instead of restricting their weapons through certain classes. Unlocking skills for weapons will require you to reach a certain proficiency with that weapon's type and higher proficiency will be needed to wield high tier weapons. Proficiency in weapon types can be gained by using the weapons of that specific type to kill monsters.

The game will have basic slash attacks which can be chained together in different manners to perform certain combos. Furthermore, there will be some special attacks that will require timed input with proper coordination in order to be executed (These will be known as Skill Attacks). These attacks will replace the traditional method of 'One button for a skill', which is implemented in most MMOs and they will create a sense of skill in the game. Besides attacking there will be mechanisms to Evade, Block and Parry. However, there will be some Skill Attacks that may be unlockable or non-interruptible.

There will be a basic level implementation of a marketplace where players may buy and sell weapons, armor, healing potions, antidotes etc.

1066. MOOD DETECTOR KIT

Project Advisor	MR. MUSTAFA HASSAN
Status	Completed

The main idea of this Mobile Application is to gather up all the social items in one application and provide them to the end user according to his mood.

This is an AI based project but app will use DB to store some data like user profile and suggestions items link movies, quotes, field related tasks. App will fetch the songs from API. The main part of AI in this project is mood detection. In this project we will use **Data Crawling** for songs and for movies and other suggestions we will use our static database.

When user will signup first time, they will create a user profile. After that camera will open and user can take a selfie. The app will detect the user mood from their face. Another option for the user to enter their mood is manual method app will provide the user a manual method (Select Field) to enter their mood.

All the **Moods Dataset** is listed below

- Happy
- Sad
- Angry
- Bad mood
- Depressed
- Romantic
- Peaceful and calm

When the user mood is detected, the app will show **feedback option** for the mood detected and after that it will show the suggestions like (Movies, Songs, Books, Field related suggestions and good Quotes). We will create a DB for the profile storage and for music and movies we will use YouTube or other music API. So according to the mood and the Profile we will give the suggestions to the users.

We will also make an admin panel with ReactJs from where admin can add the data. We will use React Native for the mobile application because it is the latest technology and it support both IOS and Android. For mood Detection we will use python.

1067. NFTEASY

Project Advisor	MR. MUSTAFA HASSAN
Status	Completed

NFTEasy is a no-code tool that allows users to easily create, mint, and sell non-fungible tokens (NFTs). NFTs are digital assets that are unique and cannot be exchanged for other assets on a one-to-one basis. They are often used to represent items such as artwork, collectibles, and in-game items.

With NFTEasy, users can create NFTs without needing any technical knowledge or programming skills. The tool provides a simple, user-friendly interface for designing and uploading NFTs, setting their price and terms of sale, and then selling them on popular marketplaces.

Users can also mint new NFTs using NFTEasy, which involves creating and issuing a new digital asset on a blockchain. This process requires a small amount of cryptocurrency, such as Ethereum, to cover the cost of the transaction.

Overall, NFTEasy is a powerful and convenient tool for anyone interested in creating and selling NFTs, whether they are artists, collectors, or gamers. It allows users to easily tap into the growing market for NFTs and participate in this exciting new world of digital assets.

1068. ONLINE AUTOMATIC BIDDING SYSTEM

Project Advisor	MR. NADEEM TARIQ
Status	Completed

The proposed system allows users to host and take part in online auctions. Users can participate in auctions after signup on the website. It is a centralized application. After successful signup user will be able to host auctions by entering the necessary details such as product name, image, description, base price, and auction duration. They can also take part in ongoing auctions by placing bids. Users can keep track of their bids from the view bids section of the website. The host can halt his/her ongoing auction before time if satisfied with the final bid price. Once an auction is ended the winner can claim his/her prize by entering the product details of that auction in the close auction section.

1069. DERMACURE-SKIN ANALYSIS

Project Advisor	MR. SAEED IQBAL
Status	Completed

Human skin is one of the most unpredictable and tough grounds to mechanically synthesize and analyze because of its quality of unevenness, tone, presence of hair, and other mitigating options. Hence, there is a raising need for an automatic skin disease detection system with high accuracy. Classification of skin diseases using medical images is more challenging because of data set Imbalancing and data security concerns. In the field of Medical Image Analysis (MIA), the performance of both the Convolution Neural Network (CNN) for classification and a federated learning strategy for data privacy protection is amazing. A breathtaking idea to analyze human skin while ensuring data security is the CNN-based skin disease classification combined with the federated learning approach. An image augmentation strategy was followed to enlarge the dataset and make the model more general.

1070. CURIFY-EHOSPITAL MANAGEMENT SYSTEM

Project Advisor	MR. SAEED IQBAL
Status	Completed

This project is based on an online hospital management system that helps and organizes various functions of a hospital. Online appointment, medical prescription records, laboratory tests, pharmacy. Overall, the online Hospital management system completes all the tasks and processes involved in running a hospital user login or sign up with her/his valid username and password. After login, the patient finds the list and availability of the doctors, visits the pharmacy, and check laboratories.

1071. LUNGXAMINER-LUNGS DISEASE DETECTOR THROUGH X-RAY IMAGES

Project Advisor	MR. SAEED IQBAL
Status	Completed

Nowadays, in order to diagnose or predict any diseases on humans, we must have a proper diagnosis in order to predict the disease that is present in that human body. In general, for illness prediction, we try to employ X-Ray, CT, or MRI scan techniques to make a judgement on the suitable disease. In general, a medical professional must be well-versed in the relevant subject in order to detect abnormalities in humans. Patients generally suffer from long appointments and doctor's unavailability, which wastes time, and in the event of an emergency, patients are unable to receive treatment on time, which leads to more severe diseases such as advanced stages of lung cancer. People who are experiencing financial difficulties may be unable to afford these appointment charges or fees.

The approach we propose is to develop a lung disease detector application that uses Deep Learning techniques and algorithms to detect the crucial three diseases, which are Pneumonia, Covid19, and Lung Cancer. We employ two models, Vgg16 and Vgg19, to predict lung disease from chest Xray pictures and then determine which model has the best accuracy and performance. Normally, a chest X-ray is used to detect any abnormalities in the lungs and to provide detailed information about the lungs. So, our program will request x-ray scans from patients and provide a report indicating whether or not they have pulmonary problems.

1072. CONNECTHUB

Project Advisor	MR. SAEED IQBAL
Status	Completed

Problem:

Other platforms do not have the functionality of making the professional resume website as well as providing the eye-catching themes for the resumes and allow the user to customize it. There are many applications for connecting companies to users, and many applications are for making resumes, but Connect Hub provides a platform where users can connect with the entire world and make his skills look more professional through Connect Hub resume themes.

Proposed Solution:

Connect hub is the combination of many web applications. With Connect hub users do not have to go to other web applications. Connect hub is the sum-up of all the platforms from making your skills look professional to give a user a job.

Related Work:

Many web applications also have a little bit similar to our web application but there are many features that need to be added. Another application allows members (both workers and employers) to create profiles and connect with each other in an online social network which may represent real-world professional relationships. Members can invite anyone (whether an existing member or not) to become a connection. Other applications allow users to join groups, write articles, publish job postings, post photos and videos, and more but the user is enabled to make his portfolio resume. Connect Hub

provides all these functionalities in addition to it also provides an option to create a professional resume.

1073. CLINICAL DECISION SUPPORT SYSTEM USING EXPLAINABLE AI

Project Advisor	MR. SHEIKH WAQAS AKHTAR
Status	Completed

A clinical decision support system (CDSS) is intended to improve healthcare delivery by enhancing medical decisions with targeted clinical knowledge, patient information, and other health information. A traditional CDSS is comprised of software designed to be direct aid to clinical decision-making, in which the characteristics of an individual patient are matched to a computerized clinical knowledge base and patient-specific assessments or recommendations are then presented to the clinician for a decision. However, Limited expert time is a key bottleneck in medical imaging. Due to advances in image and text classification, AI can now serve as decision-support for medical experts, with the potential for great gains in productivity and, by extension, public health. However, these gains are contingent on building and maintaining experts' trust in the AI agents. Explainable AI may build such trust by helping medical experts to understand the AI decision processes behind diagnostic judgments.

1074. MIHU: WEB APP WITH REVERSE IMAGE SEARCH AND 3D RCONSTRUCTION FOR FURNITURE

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

Online shopping has become a crucial part of our lives, so much so that an era without it just seems distant. Everything is available online for sale but when it comes to furniture, the resources are sparse. The number of online stores that sell furniture is pitifully low and most of them are expensive. This project aims to salvage that. This project will be a web application with artificial intelligence that will provide an online platform with multiple vendors that sell furniture. It will help people find the exact piece of furniture they are looking for. It will be the only stop for anyone who wants to buy furniture.

1075. SPY HAT

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

All social media platforms are experiencing an increase in hate speech, with Twitter serving as its primary hub. Even though posting hate speech, which is often regarded as a felony, or other objectionable material is occasionally possible. Hate speech is when someone expresses hatred towards a certain group of people on purpose. People today start following trends without first verifying them. As a result, there is a website that will pull user tweets based on top trending topics, analyze user location, classify hostile tweets using deep learning model like CNN, RNN, LSTM, and BERT into hate speech categories, and present statistics for the categorized tweets. Additionally, it will display tweets of users anonymously.

1076. E CLINIC

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Completed

E-Clinic is a telemedicine app that enables patients to connect with healthcare providers remotely. The app will allow patients to schedule virtual appointments, receive diagnoses and treatment plans, and even receive prescriptions through the app. It will also provide healthcare providers with an electronic medical record (EMR) system to manage patient data and treatment plans.

E-Clinic will be user-friendly and easy to use, with a simple interface and clear instructions. It will be accessible on various devices, including smartphones and tablets. In addition, the app will prioritize patient privacy and security, with robust measures in place to protect patient data and ensure the security of virtual appointments and communication.

Overall, E-Clinic aims to improve access to healthcare and patient outcomes by offering a convenient and efficient solution for healthcare delivery. It will allow patients to receive medical care remotely while still receiving the same high-quality care they would receive in person.

1077. EXPLOREME

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Our system facilitates visitors and living people in different areas of Pakistan. You can install and download Applications on multiple mobiles and systems. A booking or scheduling app can help you and your clients avoid wastage of time. A single app for hotels, homes, and vehicle reservation deals for your holiday trips. No need to manage multiple apps and keep a record of each thing on different apps. Whole trip hotel booking to car, cottages are done by single app. So you can search by city, attraction, landmark or hotels name and vehicles with just one tap. Filter by price, review score, and other things important to you. Find your last-minute stay or book far in advance. Contact your host, view check-in times, and leave behind reviews. ExploreMe guarantees the best price and it can get even better when you view the app. The map views, local experience information, and verified traveler reviews help you find the perfect accommodation for your specific journey and budget. Become a host and start earning. We also provide multiple payment options. You can register your cottages, hotel and vehicles by becoming the host. Our maps and landmarks will guide you completely until you reach your hotel without breaking a sweat. Our App provides your required vehicle at reasonable prices.

1078. TARGETED PESTICIDES USING IMAGE PROCESSING

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Our automated robot will be used for spraying pesticides on targeted plants having diseases. This will decrease the usage of pesticides because farmers are spraying pesticides on all crops by which a huge amount of pesticide is being used.

Our robot will have a camera on the front which will detect the plant disease as the robot will be trained through Datasets then it will go to that specific plant and will spray the pesticide on it and the nozzle will be approximately 6 inches upward from the plant so that it should spray it properly on it. Our robot body will be of aluminum as it is light in weight so that less energy will be consumed.

Our Automated robot will have PLDC wheels to move across the field, it will have a camera to detect the pests in plants the nozzles on the robot will spray the diseased plants, the most cost effective thing is that the robot will work on solar energy as solar plates will be placed on the top of the robot there will be a database in which the robot will take the snap of the diseased plant and will be displayed on the web application and there will be a *count* of how many plants have been sprayed. The working of the robot will be done as it will move 10 meters forward and takes a turn at 2 meters and then comes 10 meters backward and will continue this session until the whole field is discovered. If the robot moves away from the path, it will notify the user on the web application.

1079. SOLAR MANAGEMENT SYSTEM

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

Load shedding is one of the major problem of Pakistan. There are several reasons of load shedding. In this modern world, electricity has become one of the Basic requirements to survive with the advent of industrialization and development of machines. Not only in industries but also in residential areas electricity is required to run the machinery. There are several ways that you can avoid load shedding. One of them is use of solar power. Due to load shedding, and massive increase in electricity rates, So many people looking forward to shift towards solar power in recent years. If a person wants to setup the system, there are not so many applications available which provide the guide to the customers about how to setup the system what are the basic requirements. The idea is about to design an application which provides a complete guide to a user willing to setup the solar system in house and provide assistance if the system is already installed. The application will calculate the total cost required to built the system, number of panels and Inverter required base on the house load, If the system is installed, User can check how long the backup lasts during power cut by increasing or decreasing the house load. Base on the current temperature the application find the maximum power a system can generate. User can generate a pdf file of the system details. Application have multiple other options which provide the basic knowledge and help for common issues normally face by customers.

1080. GENERAL THERAPY ASSITANT APPLICATION

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

A person who has to undertake therapeutic exercise for general difficulties will be helped by this application. The user will initially have the choice of choosing the body part they want to stretch or the one in which there is pain. With the support of the General Therapy Assistant Application, the user will then perform daily activity in accordance with their level of pain. By tracking their motions and utilizing motion detection to create an outline of proper form, this app will assist them in exercising correctly. The program will alert the user if they make a mistake, and they can then restart. Additionally, it will recommend an exercise regimen based on the user's level of pain. With the aid of this app, users will be able to perform pain-relieving exercises without having to pay for a therapist's services. By doing this, the app will serve as their personal therapy assistant and be convenient to use anywhere the user desires. In that instance, the user will evaluate their own position. It will contain basic tracking of how much exercise is performed and what the amount of pain was during each workout.

1081. REDWIRE

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

In this world of information technology, Cyber Security has gained a very important role. Companies and organizations have adopted IT for their work. Critical Information is travelling over the internet which needs to be protected at any cost. As developers, the motivation is more in the sense to develop the product therefore they miss many loopholes inside a project that the attacker can exploit to get crucial data and can do any harm to the organization. Our motivation is to develop a tool that will contain an automated scanner which will test a website to find possible bugs. Still there are many logical bugs that cannot be detected by the tool, therefore we provide a platform for security

researchers to participate in their bug bounty program, in which they can find bugs, report them and get paid. Our aim is secure digitally stored assets of our clients to prevent any future damage by a hacker to their organization.

1082. STUDENTS LEARNING REVOLUTION (SLR)

Project Advisor	MR. USAMA PERVAIZ
Status	Completed

Education research has frequently examined effective teachers and students, but has ignored effective communication skills. Briefly, the education process in classrooms and other environments (internet, out-school activities) have been facing lack of required communication panels. The obstacles due to lack of communication present in a student; are a kind of anxiety and being introvert that has affected them a lot. Our social application will be based on a communication system where a student can communicate with teachers and students of same course/department that will help in increasing the skills of a student or a teacher and the way of communication will be revived.

1083. PAKHAWKERS.COM

Project Advisor	MR. USAMA PERVAIZ
Status	Completed

This website will help people know where to find the street hawkers, it will have buying zones where people can go and buy anything from the street hawkers. Every street hawker will have a list of items associated with them for the purpose of selling. Anyone who visits the website will also be able to check the location of street hawkers in real-time. The timings of their availability will be displayed on the website. This web app will deal with the problem of the general public on daily basis, people will be able to keep track of the hawkers that pass through their area. The business models who work on selling their items through street hawkers will be able to keep track of their movement and items so it will be beneficial on the business level as well as the general public. A lot of different people can take benefit from this website. It will be good for small businesses that work through payment by hand. Street hawkers can grow their business through this app and also they will be introduced to technology on a basic level, it will be good for education purposes too as it will bring the advanced technology on a street level.

1084. SOCIAL WINDOW

Project Advisor	MR. USAMA PERVAIZ
Status	Completed

1085. QUICK SHOP

Project Advisor	MR. USMAN AAMER
Status	Completed

The business to consumer aspect of electronic commerce (e-commerce) is the most visible business use of the Word Wide Web. The primary goal of an e-commerce site is to sell goods and services online. This project is a web-based shopping system for an IT based shop. The project objective is to deliver the online shopping application. This project is an attempt to provide the advantages of online <S25BS005>

shopping to customers of a real shop. It helps buying the products in the shop anywhere through internet by using a web site. Thus, the customer will get the service of online shopping and home delivery from this shop. Also, Customer will get best price because of price optimization policy adoption. Through product verification system the user will get the authentic product while sitting at home.

1086. INTERIOR TILING USING AR AND AI

Project Advisor	MR. USMAN AAMER
Status	Completed

Interior designing is a trend nowadays and sometimes it is a need to give your house a new look. To perform this modification and designing people go to warehouse store and choose the new marbles and tiles which is really a big challenge, because they got confuse in choosing designs and patterns how they actually look in their house or in a particular room. In all this procedure, a person spends money, time and effort but what if they do not like the final looks of their room after all this work. All their effort will be in vain. For this problem, we are creating a **web app** using which users can customize the look of their house multiple times and visualize the **3D** look with different marbles applied in rooms in **virtual reality**, same time until they get the desired look, paint and design. Moreover, our application will contain an online store where user can see the prices of the marbles/tiles applied so they can manage it with their budget.

1087. DIGITAL JOURNALISM

Project Advisor	MR. USMAN AAMER
Status	Completed

When any incident occurs such as Quarrel, Accident and Bomb Blast then Media or Police can't reach on time at the incident. The eyewitness that presents at the incident location who capture the live video through our app or mobile phone. As, location is not saved by default in mobile phone. Due to this, old videos and news which viral at different locations like if an incident occurs in Quetta and then viral in Punjab. Our app saves video time, date and location and Chances of criminal identification will be present in video.

1088. FALCON APPAREL

Project Advisor	MR. USMAN AAMER
Status	Completed

In most of the applications, they allow their customers to customize the design but they allow in very limited premises, like you can only change the color or the design of the shirt. Some allow their customers to view how it will look on them but don't allow their customers to customize the shirt according to them, both of these facilities are not available at one place and their accuracy of viewing image is not very good. If someone want to buy something and customize it, he has to go to website and purchase it but can't view it and if someone want to view it, they don't allow to customize the shirts.

Due to COVID, customers also want to try the shirts virtually/online as in the market hundreds of people have touched the shirt or tried it by wearing.

1089. EMOTION RECOGNITION FROM URDU SPEECH

Project Advisor	MR. USMAN AHMED RAZA
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Status	Completed
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Emotion recognition from speech plays an important role in the field of human machine interaction. Speech interfaces offer humans an informal and comfortable means to communicate with machines. Emotion recognition from speech help humans in security, medicine, entertainment, and education. In online interviews, virtual examination, E learning it isn't easy to judge a candidate's eligibility, patient's emotions, student's interest respectively. In E-learning where the tutor can change, the presentation style when a learner is feeling uninterested, angry, or interested etc. Our system classified audio speech files into happy, sad, angry, disgust and neutral emotions using different machine learning algorithm.

1090. AGILITY HUB

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

The number of mobile fitness apps has increased significantly as a result of various strategies being used to encourage more active lifestyles. The goal of this project is to improve people's fitness lifestyles through an interactive platform where they can access all the tools and features required to lead a healthy lifestyle. The people that are prepared to maintain their body condition are unable to access everything in a single app, which is the next significant issue we identified. This includes a proper nutrition plan, efficient exercises, gym wear, supplements, and a platform that puts everything our user needs about the fitness business at his fingertips. In response to these issues, it was decided to create an app that performs a variety of activities, including a shopping system, BMI calculation, personalized diet plans, push alerts, feedback, timer, results, etc.

1091. EMOTION RECOGNITION FROM URDU TEXT

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

No one has much time in the age of speed and quick progress to sit down and think about how people behave. Studying human emotion is crucial in this situation. The conversation structures, audience investment patterns, and mental wellness may all be improved by an emotional analysis of a book. Urdu hasn't undergone as much research on emotion detection as other languages have. The complicated morphology of the Urdu language is the most difficult barrier. With the use of deep learning techniques, this web-based system, however, may swiftly and correctly aid in the process of understanding human emotions from pure Urdu text. The name of the emotion will be output after receiving input in the form of Urdu text.

1092. COGNITIVE VIDEO RECOGNITION AD BUDDY

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

The adverts currently playing online are totally unrelated to the content they are playing with. This brings out the issue of the users either skipping out on ads, users being un-interested in the adverts and this ends up with the users not ordering from the advertisements. The businesses which are paying a lot of money for their advertisements are not making it back because of wrong ads being played at the wrong time and currently there is no software available which rectifies this issue and plays relevant ads relating to the content. We will develop a tool which will understand all kinds of scenes in videos of

any length, and play some relevant ads to what is going on in the video. We will also give the option to users, to watch ads that are relevant to them i.e based on their age, hobby's, interests, etc.

1093. FIND A TUTOR

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

Find a Tutor is a mobile application designed to help students find qualified tutors in their area. It allows students to search for tutors by subject, price. It provides detailed profiles of each tutor, including their qualifications and teaching experience. It also allows students to contact tutors directly through the app to inquire about pricing and availability. The app also includes a messaging feature, allowing students and tutors to communicate quickly and easily. Additionally, users can easily book lessons and manage their tutoring sessions through the app. Also, the application provides students with information about tutors, including their experience and qualifications, as well as a feedback system to help ensure that tutors are providing quality services. The application also allows tutors to easily create a profile and list their qualifications, availability, and rates. With its comprehensive search and filtering options, users can quickly find the right tutor for their needs.

1094. GREEN VALLEY

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

Many people want to buy fresh plants for home decoration or for many reasons and they are directly concerned to nearby nursery, but most of the time peoples don't know about the plants like plants name or its benefits as well as seller is also not technically skilled. So many mobile applications like Ali express or Amazon are currently working on sales of artificial plants, but they are not selling fresh plants. To solve these problems we make a mobile application that provides followings Benefits:

1. Garden Care i.e. pest control
2. Landscaping, serving you with the best art and craft of growing plants and creating a beautiful environment within the landscape.
3. Lawn repair and restoration.
4. Trimming and hedging of plants.
5. Garden clean-up.
6. Professional garden design.
7. Lawn mowing

One of the major feature of application is to scan the leaves or flowers to get the details of the plants. The proposed system can guarantee to keep the records are safe and privacy which is stored in the database. It converts unstructured data into structured data and sorted format. It is very helpful, reliable and performs well functional to get an alert message and emails on the cell phone.

1095. CLINICAL MIDECS: DOCTOR CONSULTATION APP

Project Advisor	MR. WAQAR MUGHAL
Status	Completed

As we know that some patients do hesitate from the awkward odor of the hospital and some feel hesitated and face the problems in booking of appointment from the doctor. Patients also face problem to buy medicines in hospital and waiting in a long queue. Sometimes, the queues are so long that the patient has to suffer a lot while waiting for his/her turn. They waste their time in such activities. What if there was some kind of hassle-free system where which we could use to overcome these challenges.

What if there was a mechanism which the patients could use to avoid these long queues which make them wait for hefty amount of time. There are also many people which cannot go for a routine checkup physically to the doctor because their homes are too far away from the hospital or they live in a rural area form where it is not too easy to reach the hospital or a clinic to have a checkup form a specific doctor. To overcome all the problems, we are going to design a web-based application for sorting out these types of problems. We will solve the problems of the patients which they usually face in their routine. Similarly, after getting checked by the doctor, searching for the prescribed medicines is also a difficult task because here in our cities, we have experience that it is not necessary that the prescribed medicine will be available at every medical store. So, the patient has to do hassle to search the prescribed medicines by the doctor. We are also going to solve this problem by reading the doctor's prescription and finding the prescribed medicine form different online pharmacies and from the pharmacies which are will be liked to our system. This will help us find the prescribed medicines easily and make the patient tension free. The same procedure we are going to follow for the laboratories as well. The main goal of our project is to facilitate the patient in every way we can using our web-based application. **"Clinical Medics"**.

1096. PERSONALIZED HEALTH CHATBOT

Project Advisor	MR. WAQAS ARSHID
Status	Completed

To lead a good life healthcare is very much important. But it is exceedingly difficult to obtain the consultation with the doctor in case of any health issues. The proposed idea is to create a medical chatbot using Artificial Intelligence that can diagnose the disease and provide basic details about the disease before consulting a doctor. To reduce the healthcare costs and improve accessibility to medical knowledge the medical chatbot is built. Certain chatbots acts as a medical reference books, which helps the patient know more about their disease and helps to improve their health.

1097. SELECTIVE TALKS

Project Advisor	MS. AYESHA ZAHEER
Status	Completed

We will be creating multi user web application using (HTML, CSS, BOOTSTRAP) for front end designing. (python) for back end.

Development and machine learning, MATLAB for computer vision and image related work, while we will use techniques to remove unofficial words, videos and images while having official conversation within organization which leads to the security of legacy of the organization.

1098. THE GURU

Project Advisor	MS. AYESHA ZAHEER
Status	Completed

It is a question and answer based website specially designed to help grow Pakistani programming community. It has many features like Live chat box, real time online compiler with debugging. This compiler is being shared between people which are in conversation with each other. Questions and answers on this website will be authenticate using voting system. It will also rank the users with their universities that are posting question and answers with the ranking system.

1099. DISCOUNT BAZAR

Project Advisor	MS. FAIZA KHADIM
Status	Completed

In this era, everyone has an internet whether they are at home watching a T.V., using a computer, a mobile phone or controlling appliances using internet, they need everything in the best of their convenience. The purpose of the project entitled “Discount Bazaar” is to develop a software which is user friendly, simple, fast and cost-effective, for personal and business use and makes the data processing very fast. It's a full featured online platform that bends over backwards to give us the flexibility we need to run an online platform. The basic concept of the application is to allow customers either to shop virtually or to go to their desired store nearby after browsing through a page of different suitable discounted products. It will not only save their time but also money. GPS system will allow users to look for products that are on sale nearby with nearest shop and their addresses, so that they can go and fetch on their own if they do not trust online shopping. The Price Comparison system will allow customers to compare prices of products among local sellers and other online shopping websites. In this way, local sellers will be able to compete against online shopping giants for the modern generation.

1100. BLACK-SWORD

Project Advisor	MS. MAHRUKH BATOOOL
Status	Completed

Since most gamers enjoy classic games, so we created this action-packed game based on our favorite memories from childhood. The game will be captivating, tough for new gamers, and addictive for users. Story mode and survivor mode are the two game modes. In the game's Story mode, the hero must rush through the many stages to get back his daughter from the primary monster who has taken her. The player must endure 15 minutes of torture in the game's survival mode where many different in-game enemies will try to stop the player until the timer runs out to earn in-game goodies that can be used in the main story.

1101. AUGMENTED REALITY HUMAN SCANNER

Project Advisor	MS. MAHRUKH BATOOOL
Status	Completed

Through decades manufacturers of clothing like shirts and pants have been using procedures that only give them a rough concept of the shapes and sizes. Through our research we have been able to amass a collection of AR human scans from all across the world. We calculated the mean width, instep height, and heel width of all the body scans in each length class and then averaged the results. The findings of this study show that the mean body measurements vary widely between regions, genders, and consumer groups. It is recommended that each length class includes different body shapes to accommodate the needs of as many customers as possible. Update the old last grading tables to reflect the body dimensions of today's clients. Since human clothes intended for one group of individuals may not fit another.

1102. SEGWAY POLO

Project Advisor	MS. SHAISTA SIDDIQUE
Status	Completed

The attention has been diverted from modern to traditional gameplay with the advancement of technology. Nowadays, kids (school level students) spend more time on computers, mobile phones, and other gadgets as they look forward to the entertainment and recreational stuff; hence, compromising their game interest. Therefore, keeping in mind the growing interest in social apps, we'll developed a game to solve this problem; accordingly, this game will be providing entertainment as well as help's people in growing their interest in our tradition local games.

1103. TRUSTED AUCTION

Project Advisor	MS. SHAISTA SIDDIQUE
Status	Completed

Trusted Auction Web App Site will be manufacture for online bid for products of different categories (automobile, electronics, sports etc.). The seller will upload bid with needy information and admin will review and approve that bid. Then, the buyer will get that bid and greatest bidder will get the product. The buyer and seller will sign up with their CNIC number. Only Single account can be created on one CNIC number. After signing up the user can either buy or sell through bidding. If any sort of scam occurs while selling and buying it will be reported to the admin and after reviewing the situation the admin will take suitable measures. If there is a scam, then the user's account will be blocked permanently.

1104. A SPY IN QUAID'S MOMENT

Project Advisor	MS. SIDRA KHALID
Status	Completed

Different technologies are being introduced to learning and entertainment platforms at this time of growth and improvement, and virtual reality (VR) is one of these technologies that is attracting a lot of attention. We want to create a VR-based 3D game that combines Pakistan's history and culture in order to provide the gaming industry something fresh and different. The major idea is to depict Quaid-e-Azam, a historical figure from Pakistan, as well as its architectural styles, culture, and clothing, in order for gamers to both learn about Pakistan and enjoy a brand-new gaming genre. Resulting in the initial interest in learning about Pakistan being highlighted.

F22-SE

1105. STUTTERING AND STAMMERING SPEECH THERAPY

Project Advisor	DR. ALI SAEED
Status	Completed

1106. E-REAL ESTATE AND INVESTORS WINDOW

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	Completed

In Pakistan, there are no reliable websites that offer chances to invest only in real estate. The platforms that purchase and sell real estate do not ensure that all of their clients are SECP registered. The fact that many real estate websites do not enable users to check the current status of the money that has

been paid and the remaining amount left presents a special challenge. Users cannot, in essence, monitor the status of transactions in real-time. So, this brings us to the actual issue that, there is no centralized mechanism to let people invest exclusively in real estate with registered companies and monitor the status of investment in real-time. But by integrating the API of a third-party source, the SECP, we can guarantee the legitimacy of our business. In addition, as our system will handle sensitive information about our clients' accounts, we will utilize PHP Laravel, the greatest framework for database security. As it has mechanism like protecting route filers, HTTP force and CSRF etc.

1107. SAHULATGAAR

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	Completed

We are working on a project that will be useful to the people who seek for door-step services. There are many people who are so busy in their life that they don't have enough time to go and find labor related to their need. Our website will be helpful for them as it will fulfill their requirements related to their in-house needs. Without wasting any time and energy they will be able to call any kind of service providers for their related problems. Well Trained highly-skilled and trusty professionals will be available for them 24/7. Along with services, our website will also provide facility for online product sale and purchase including bidding option.

1108. SURVEY ANALYZER AND STATISTICAL TEST AUTOMATION TOOL

Project Advisor	DR. NAUMAN MAZHAR
Status	Completed

The problem is that we require different platforms to conduct the survey's and then converted into certain format and then we are able to apply statistical test to get the required result. Currently there is no application available in the market where we can conduct and analyze survey forms and apply statistical tests on data collected by surveys at a single platform. There are different applications available in the market where above-mentioned tasks are done but on separate platforms e.g., survey conduction on one application and application of statistical tests on survey's data on some other application which is very inconvenient for the user. The web application we suppose to develop is named as Survey Analyzer and Statistical Test Automation Tool, it is capable of handling large amounts of data and can perform all of the analyses covered in the text and much more. Our developed product will perform all tasks on a single platform which will provide too much ease to the user and also make the results efficiently. Our product will also handle the wide range open-ended questions using Machine Learning Algorithms and Natural Processing Language (NLP). Our product resolves all the problems and provide all the services on the single platform.

1109. PRIOFORT

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	Completed

Prioritization of the functional requirements is most important to start working on a project. As we know prioritization of requirements is a time taking process. It takes a lot of time and chances of different errors and defect may occur. SAHP (Spanning Tree Based Analytic Hierarchical Process) is the latest prioritization technique which is more scalable for large size requirements and assure accuracy. Moreover, effort estimation also plays an important role. For accuracy of each and every task, estimation of time is required and cost should be estimated to provide best of results. For the ease

of the students and teachers we have come up with the idea of a web-based application that will show the prioritization of requirements and do the effort estimation of the task. Both prioritization and effort estimation are required for schedule requirements among parallel developers. Here, we are developing web-based tool which will schedule all requirements using prioritized list of requirements and estimated efforts of each requirement based on available resources.

1110. VASP (VIRTUL ARMS SALE AND PURCHASE)

Project Advisor	DR. NAUMAN MAZHAR
Status	Completed

Our project is aimed at developing a windows desktop-based application named VASP for managing the inventory system of any organization. It helps to keep the detailed information of the stock of an organization with the involvement of a Technology system. This system can be used to store the details of the inventory, stock maintenance, update the inventory based on the sales details, and generate sales and inventory reports daily or weekly based. It will include minimize the errors while recording the stock. It will help to make the system easily managed and secured. All of the data will be Hosted on remote Cloud Servers to prevent any data loss or breach. This project is aimed to solve different problem affecting to direct sales management and purchase management.

1111. RETRIEVER

Project Advisor	DR. NAUMAN MAZHAR
Status	Completed

As web technology is well-known and commonly used nowadays, so everyone has an easy access to them no matter where they are. This application is developed to find lost items. The focus of the application is on the person who has lost valuable item. Many people simply don't want to go into the depth of the matter by being involved or reporting a complaint to specific authority. So, it is mandatory to develop a system that can help to overcome these problems. This project is helpful because there is no proper tracking of lost item in our country. This website requires knowledge of web development, software engineering, image processing. These knowledge areas are to be used throughout the development of this project. The end product is a Web Application developed with better framework which will give good performance than the other frameworks. This web app will be used for any identifiable valuables. This web application provides a very basic and easy to use, user interface so that every person can easily use the application.

1112. BUILD TO ORDER PRODUCTS PROCESSING & PRODUCTION MANAGEMENT SYSTEM

Project Advisor	DR. NAUMAN MAZHAR
Status	Completed

This software is being developed to get rid of issues in production management along with invoicing, accounts and inventory management of company. It is beneficial for both clients and owners. When someone has to purchase any product e.g., furniture or any customized item like warehouse racks, they need to visit or call the industry which consumes time and effort. It is also a main reason for reduced sales so in chat helpline system is added in our software for client's convenience.

After placing order clients are worried about status of their ordered product like delivery time, on which stage the production has reached, and how the final product will look like after payments.

The management also finds it difficult to prioritize orders and sometimes orders are overlooked or forgotten that which project has least delivery date and which should be prioritized accordingly. It also checks how much time is taken individually during the production.

1113. AEGIS: DEVELOPMENT OF WEBSITE SECURITY LEVEL CHECKING TOOL

Project Advisor	MR. ADEEL ARIF
Status	Completed

As companies expand, they reveal themselves more on the internet, making them vulnerable in terms of cybersecurity. Security teams of a company cannot attend to every threat. Hence, an autonomous technology is needed that automates the pen-based testing methodology which is done only on annual or ad-hoc basis, that can identify threats and prioritize risks where needed. We plan to prepare a website to carry out security level testing for other websites by generating attacks on the website being tested, from a hacker/attacker's perspective. We will launch three attacks namely, SQL injection, code injection, form tampering and there is possibility of studying DOS attack. Complete preparation of this project will take about 8 months. In this duration we aim to achieve in depth knowledge of information security field, and insight on a hacker's mind.

1114. HOUSE-MOVERS & FEEDBACK WITH NLP SENTIMENT ANALYSIS

Project Advisor	MR. ADEEL ARIF
Status	Completed

Buying a new home or switching lifestyle from one place to another. People face several problems. One of the major problems is shifting or moving products. It will be considered the same as for apartments, offices & other locations. So our application will solve the problem of shifting from one home, office, or apartment to another. The proposed application enables users to hire a team to help them during moving or shifting a house, office, or apartment. We are focusing on making the process easy for the user while considering the safety issues we face during the shifting process and also focusing on saving resources like time, money & hard work for the user. They will pack household items, convey the shipments, and establish the destination location in accordance with the user's or customer's instructions. A Person may need to transfer his house, office, or apartment due to several reasons for his education, Business purpose, or any other personal reasons. Our app carries out every stage of shifting with perfection using ratings and according to your location.

1115. KASHTKAR

Project Advisor	MR. AHSAN AZHAR
Status	Completed

Kashtkar is a mobile application that will connect the agriculture ecosystem with the digital world, while enabling the farmers with the next generation farming techniques to solve food, fiber, fertilizer, and feed challenges. This app will provide a crop calendar to keep track of crops, soil testing techniques, crop advisory using a voice chatbot which will be used for dealing with user queries.

This app will also provide market prices of crops in Pakistan, weather report of a specific geographical area and satellite insights to make the crop more effective. Moreover, this app will also have the feature of M-commerce which will provide the input for Integrated Pest and Nutrient Management approach.

1116. FETTLER++

Project Advisor	MR. AHSAN AZHAR
Status	Completed

Our web app will be able to recommend a diet plan to the user for the next 30 days with only the body picture given by the user. Many users want to start a good diet but do not have resources for doing so; our app will provide these resources at no cost. In addition, users (looking for specific brands products) can order nutrients, which are unavailable in their city or country.

Main knowledge areas required for this project includes Machine learning, Deep Learning, Website Development, Software Engineering and Cloud Computing.

1117. PICKAPP

Project Advisor	MR. AHSAN AZHAR
Status	Completed

It is a smart-phone application for any educational institution's private van system. There isn't a single application that allows people to book vans or other types of transportation online for a certain amount of time, such monthly or annually, from their doorway to their destination and vice versa. Through this app, students may communicate with drivers and parents as well as find the whereabouts of their reserved transportation. Currently, in the absence of our app, both parties' transporters and passengers must physically interact in order to interact; they merely exchange numbers before verifying the drivers. This procedure is laborious and time-consuming. They simply engage in fair negotiation with one another. However, if the call is to ask the driver for their whereabouts.

1118. PEACMAKER

Project Advisor	MR. AHSAN AZHAR
Status	Completed

Noise is very unpleasant and irritating like traffic noise, construction noise, fan noise and it can lead to many diseases like high blood pressure, heart disease, sleeping disorder and stress. Our system will identify the noise and cancel out the noise by creating the exact opposite of that particular wave which helps us to keep the noise out of our hearing and as a result, no noise will be heard. Machine learning for model training, react JS for front end and Django for backend and we will learn how to integrate API's.

1119. PARSEND

Project Advisor	MR. AHSAN AZHAR
Status	Completed

Our courier service will be on Web-based application. The main purpose is to provide courier services so they can easily send and receive their parcels. Customer will have live tracking of the package sent. We will also have the chat system so the customers can easily communicate with the riders.

1120. CCTV FOOTAGE ANALYZER USING AI (COMPUTER VISION)

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Completed

The system is to help in solving crime, theft by automating the task of detecting people who accessed a certain area, identifying them in other videos from nearby cameras and make AI security and theft identification accessible for everyone without the need for upgrading and investing in a more expensive CCTV system.

1121. IDENTIFY FAMOUS PEOPLE USING REKOGNITION

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Completed

As in the world of internet the social media platforms are getting very common and famous in our generation, the youth are attracted to fame of social influencers, Lollywood stars, cricketers, famous entrepreneurs Famous People (Celebrities) are highly influential people whose actions and decisions are watched rated by wide audiences. Identifying famous personalities is somehow important and also has an impact on a person's general knowledge criteria. In daily life, face identification requires that the observer select a single representation from hundreds if not thousands in memory. Watching and remembering thousands of celebrities including politicians, educational heroes, medical heroes, cricketers (sportsmen), poets, media, and entertainment celebrities etc. So, this application makes it way easier to recognize your favorite celebrity in the matter of seconds.

1122. FANAN

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

Placing curtains in residential / commercial property is time consuming. If it doesn't suit on first try, it would not remain eye catching for the individual thus must be changed, making resources like money and time a waste. To solve this problem, we intend to develop a mobile application using machine learning, augmented reality, and image processing. Application will place curtains in real time and suggest the best match in real time.

It can save a lot of time and other resources that will be used to understand about the clients need. Furthermore, a client can see how the curtains are going to look using the augmented reality feature. Also, this can be useful for organizations who want to elicit information from the client.

1123. MEAT VENDOR SYSTEM (MVS)

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

1124. FARM YOUR FOOD

Project Advisor	MR. HUSNAIN IQBAL
Status	Completed

Agricultural sector of Pakistan hasn't been performing as per its potential. It is a fundamental problem which has the following causes:

1. Too many middlemen between farms and end-consumer which ends in eliminating grass root level farmers from cultivating certain crops.
2. Most farmers working one dimensionally because of uncertainty of finding buyers of the yield at the right price.
3. Lack of proper yield production predictive analysis and losing crops due to floods and rainfall.

Another problem at consumer end is lack of organic food including fruits, vegetables and most farm products and eaters are forced to shift to packaged foods which can never match the quality of an organic product. It has the following causes:

1. Inconvenient and expensive to go buy organic products directly from farm.
2. Forbiddance to keep farm-pets in metro areas.
3. Lack of land and expertise to cultivate their own crops.

To solve these problems, we have proposed an android application which revolutionizes the relationship between end consumers and farmers and in turn solves each of these problems by creating alternative processes with fewer people involved. This document describes the main functional and nonfunctional requirements along with their analysis of the application and follows through with the revised project plan.

1125. PRE-NURSERY: A LEARNING PLATFORM

Project Advisor	MR. M. BILAL KHAN
Status	Completed

Machine Learning based mobile application (iOS + android) platform where Children can learn the fundamentals of a variety of disciplines, including English, Islamic studies, history, Urdu, and mathematics, from the age of 6 to 10 or 14 (according to Germany's primary age group and Pakistan's article 25A for the education of children), starting with the basics. Our app enables youngsters to concentrate on the craft of learning while also assisting in the creation of game-filled courses. **PRE-NURSERY** is a pedagogical strategy that applies principles of effective game design to the creation of learning environments. Our design is based on a self-deterministic framework, and we want to create engaging learning environments in the classroom by using what the self-determination theory has to say about how intrinsic motivation functions. Having strong literacy and numeracy skills in children is essential for their optimal development.

1126. BUILDBID- INSTANT QUOTE AND BUILDERS ONBOARDING THROUGH BIDDING

Project Advisor	MR. M. BILAL KHAN
Status	Completed

Build-Bid is an online platform that helps users get transparent and efficient quotes for construction projects, such as building a dream home. It provides a secure and transparent process for users to connect with reliable builders, and offers detailed cost analysis for the construction phase. Builders who are authorized and certified can bid on projects, and users can select the best builder for their needs. Build-Bid aims to simplify the process of finding a builder and obtaining a cost estimate by providing all these services in one place, and eliminates the need for users to meet with multiple builders in person to discuss their ideas. It also offers a bidding feature, allowing users to choose the best option for their construction project. This product aims to fill a gap in the real estate market by providing a unique solution that is currently not available in the market. It is a web-based application that handles multiple tasks at once, including providing instant price quotes based on live data and

onboarding builders for construction purposes. It is a one-stop solution for both builders and users, allowing them to connect and complete construction projects more efficiently and transparently.

1127. DIGITAL CONSTRUCTION

Project Advisor	MR. M. BILAL KHAN
Status	Completed

It is the Web based solution we are creating Web Application which will help in almost every aspect of construction work. Different problem people face while build to find best constructor, best material rates, authentic verification and documentation, material rates updates, daily wagers and many more. Similar it is same as for builders to find difficulty to have job. It will help user to find the best rate for construction and not only it will provide you the best rates of constructors but it will give you complete details of the market in which your product is present like it will provide you basic information as well as the concrete information which every user needs while investing such huge amount. Like we provide the clients the best suitable constructor for that category like residential and commercial buildings.

Verified Builders companies are here which is verified through admin by FBR federal board of revenue and SECP Securities and Exchange Commission of Pakistan. Materials are checked and verified by the Civil Engineers.

1128. RENT IT

Project Advisor	MR. M. BILAL KHAN
Status	Completed

Rent it is an all-in-one rent platform where users can rent anything like house utensils, vehicles, electrical appliances, clothes, etc. Users will have to log in through the registered mail and will be able to browse through a variety of products listed on the app. Users will have the option to log in either as a renter (one who rents his things) or simply as a user who can rent things. All the products rented through the app will need to be returned within the given period of time or else a penalty will be initiated. The person who rents a product will need to provide his identity card to the owner for security purposes. Another option is to sign a guarantee paper (stamp paper). Another very basic feature is the payment method (cash on delivery, card payment).

For developing this software, we need to know about simple and advanced web (HTML, CSS, JAVA, JAVASCRIPT, PHP, Node etc.) and also need to know the market strategy for business expansion.

Following are the results we can achieve from this:

1. People or users can search related products which they want.
2. People or users can easily rent their things (either it is a customer perspective or non-customer perspective).
3. People or users can pay their charges through their website.
4. People or users get notified by updates.
5. People or users may replace and return their products.
6. People or users can generate reviews and questions.
7. People or users feel secure (protection from any kind of scam)

1129. MEDICAL PREDICTION MODEL FOR DISEASE

Project Advisor	MR. M. BILAL KHAN
Status	Completed

Our project is detecting disease of Lungs Cancer and pneumonia. Machine Learning Algorithms will be used. It will show the result after detecting disease whether it is Lung Cancer or pneumonia. CT images are required from patient as an input. Features from the image will be extracted using Supervised ML algorithms. These features can be Statistical or texture. Statistical/ texture features will be utilized using DWPD and GLCM. We will use SVM for classification task, RBF for training purpose. Further classification will be done for testing the CT image using datasets. Datasets will be collected from Shaukat-Khanam Hospital and Chughtai Laboratory. Supervised Learning Model of ML will be used with dataset to train algorithm to predict outcomes accurately. There are lots of ML Algorithms available but we will use four to five algorithms include Logistic Regression, CART, Nayes Bayes, KNN, Decision Tree.

1130. MY STYLIST

Project Advisor	MR. MOHSIN SAMI
Status	Completed

The My Stylist mobile application is designed to assist users in selecting clothing items that complement each other based on color. The app utilizes a deep learning model to predict the color of a user's clothing item and recommend coordinating items based on complimentary colors. The application also considers the user's physique and skin tone to provide more personalized and accurate recommendations. Users can create a profile, input information about their physique and skin tone, and store photos of their clothing items in the app. The app also allows users to check if they own the recommended items by storing a list of their clothing items. The My Stylist app is developed using the Flutter framework and leverages TensorFlow for deep learning and OpenCV for image processing and computer vision. It is targeted at individuals who have difficulty coordinating their outfits or have a large wardrobe and want to ensure they are using all their clothing items effectively. It may also be useful for individuals interested in fashion who are looking for a tool to assist in coordinating their outfits.

1131. CROWDSOURCING-BASED EDITORIAL MANAGER FOR DEVELOPING AND EVALUATING SIGN LANGUAGE CORPUS

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Sign Language is a mode of communication among humans who are deaf/mute. Despite of being different from normal verbal communication, it also changes with the change of region. This project is about creating a web-based dictionary/corpus where different organizations/schools/individual for deaf/dumb people will login and upload the videos of different signs related to a particular word. A list of words will be provided by editorial that we need signs of words i.e. w1-w10. Users who logged in will view the list and upload signs related that words in this way we can gather the sign language of particular word from different regions of the country. Then we will have reviewers which will be basically sign language experts who will review the data from the crowd and on the basis of number of similar signs that sign will be standard for that particular word.

The problem domain is that we don't have a generalized/standardized data set of **Pakistan sign language (PSL)**. The **5000** words that are added on Pakistan Sign Language (PSL) website/book are the words which they bought from USA and even they are not standard signs because USA sign language varies from one state to another state.

By this project a platform will be created having standard signs against each word which will be further used in future for building dictionaries for deaf people.

1132. PLACE OF CARE

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Hostel Management is a mobile application that is created for booking hostels for individuals. This will limit manual work and also make hostel allocation so much easier for students and hostel administrators.

Some students may prefer affordable homes, which is an option that is mainly for students. It manages data in the database and retrieves it whenever required. We design this system at the request of the hostel management, through this they cannot require people to handle and calculate things. The developed system overcomes the drawbacks of manual hostel management it's said to be more user-friendly, GUI oriented, reliable, efficient, and secured with access control mechanisms. The old techniques with limitations have impacted educational systems.

We did some research and decided to develop a cross platform mobile application for android and IOS. The technologies which we ended up are flutter (Dart) for front end while using AWS services for our database and hosting. For the backend part we decided to use Php and Laravel. This project will be completed in a duration of 2 semesters.

1133. TERRORISM AND HATE DETECTION FROM SOCIAL MEDIA

Project Advisor	MR. MOHSIN SAMI
Status	Completed

The aim was to detect hate speech using a Natural Language Processing technique. Hate speech targets different characteristics such as gender, religion, race, and disability To enable successful execution of the research it was first necessary to understand what hate speech is. Here it can be concluded that hate speech has several definitions, all coming from different platforms. Hate speech detection is a classification-related tasks, and that is why further literature was reviewed to understand the idea behind Natural Language Processing and the application of various techniques. Therefore, a deep learning method, namely a Convolutional Neural Network (CNN), has been applied on a Twitter dataset to lesser the amount of hate spreading post and control all the activity that can lead towards terrorism.

1134. BLOCKCHAIN BASED VIDEO STREAMING

Project Advisor	MR. MOHSIN SAMI
Status	Completed

Blockchain based video streaming platform is service that will run on blockchain and will use decentralized approach to store data. It will be a censor free service that will make sure that user is the owner of the content and no one can block or ban the platform.

A blockchain based wallet will be connected with the platform and users can pay using digital currency to their favorite content creators. It will also allow users to gain reward in the form of tokens, these tokens will be similar to shares and can be exchanged for platform services or real life currency.

The holders of these tokens will also have a say in what direction the company heads into. Content creators will have full control of their content.

A peer-to-peer file storage system will be used to manage data and databases. Every distributed file will have its unique hash key which will help to locate that particular file so that users can access the content of the platform. This platform will be open to everyone and it can also maintain users' anonymity and therefore provides a complete privacy to users.

1135. AUTHPOINT

Project Advisor	MR. NABEEL AHSAN
Status	Completed

In this platform, there are two ends, first of writer and second of reader. Writer can upload summary, theme, sub-part of his book, poetry and articles etc. Reader can read and comment/feedback. This platform should be able to do sentiments analysis using machine learning from the reader's feedback, from which it can also generate graph which describes the positive, negative or neutral feedback to the author/writer. Also, from feedback we will give ranking to the writers. If reader is interested in buying book, he will click buy option and will buy it. But if reader wants to modify the book/article/poetry or else, then he will ask writer using chat box. Writer will change it and send it to the reader and get paid for it by the reader. There is also payment section available, using this reader can pay for books. Using this platform, readers can also make request on this website for a story from writers. All writers would be able to see request and bid on it, then reader will choose its writer and tell them the scenario to be implemented. Reader will get achievements for completing reading/buying milestone and Writer will get achievement's for completing selling milestone.

1136. BRISK INVOICING

Project Advisor	MR. NABEEL AHSAN
Status	Completed

It's difficult nowadays to generate and handle invoices manually. Organizations have to check, process, and monitor, organize and manage their invoices every day with the help of human power. As humans are prone to lapses, slips, mistakes, and errors. We are fallible due to our physical, biological, mental, and emotional characteristics, and to make it harder we are all different. Manual paperwork can't achieve perfection. Because humans can make mistakes so when it comes to the finances of an organization then it will be a great loss for that organization if there will be mistakes in their accounting and finances. Accounting plays a great role in the success of a company so if processes are automated there will be fewer chances of mistakes and loss. Moreover, receipts, sales, expenses, and tax summaries, are all crucial things to handle which require hard work and more manpower. So, we are going to introduce a web application that will handle invoices of the organization and manage them so that manual paperwork will be minimized.

1137. MEDICAL ASSISTER

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Most patients miss doctor appointments due to workload, or they encounter problems with the doctor's poor handwriting on the prescription form. Additionally, patients typically bring bundles of files or paper to appointments, including prescriptions and medical reports, so if the patient loses any crucial documents or forgets to bring these documents, it can cause serious issues. Therefore, we are offering certain services to doctors and patients through our web-based application, such as digital prescription forms, maintaining a patient record that is accessible to both the doctor and the patient, and reminder notifications for the patients.

1138. SPOTBUDDY-MOBILE APPLICATION FOR SPORTS AND SOCIAL NETWORKING

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Human tries to enjoy their time to be fit and stress free so they invented some sports/Esports. Before the internet people would collaborate for a lot of things which would result in friendship and spending times but now a days, we make things easy and most of these collaborations have become a thing of past and making friends have become difficult. Loneliness can become stressful and unfit. Another issue is that we move a lot and to new places so having a gym/game buddy is difficult to find.

Another issue is to find a right fit for competitive esports. We tried Facebook and there we never find a good fit for different games like Valorant, CSGO and Dota. The problem was that the person we would get was too low profile and sometimes too high and they won't fit together either we would leave after a single match or they. Actually, this problem arises from the need of communication in games so to play efficiently you need to communicate with your teammates.

So, to overcome these issues we thought of a platform where we are able to see others profiles and their reviews and the roles they are playing in sports/esports. Furthermore, we conducted some interviews with sports and esports players and got some requirements like managing tournaments, hiring coach. But the main goal of our application is to find the right person for the role.

We did some research and decided to develop a cross platform mobile application for android and IOS. The technologies which we ended up are flutter (Dart) for front end while using AWS services for our database and hosting. For the backend part we decided to use Php and Laravel. This project will be completed in a duration of 2 semesters.

1139. EVENTS UP

Project Advisor	MR. NABEEL AHSAN
Status	Completed

An event up is a new website which provides software for reservations for halls, venues, seminars, weddings and meetings, etc. It is an online ceremony organizing website providing easy reservations. This website facilitating customers to find Halls and Venue of their choice and place bookings according to their budge. Events up organize your events for you while providing you all the details online. Venues for ceremony, budget, catering everything is provided in this online website. This website will easily find you your right venue and location according to your ceremony and budget you enter. This website covers all the factors leading to a perfect event to happen. Complete detail about catering system will be provided if customer needs it, the customer just has to choose the catering according to their budget. Another important feature of decoration is also provided in this website which can be selected according to customer's requirements. It gets difficult for customers to visit all the halls or venues for their event so to give them ease all the pictures of the locations will be provided so that the customer can choose easily whatever venue suits them best without even visiting the site.

1140. PLANTS DISEASE DETECTION USING IMAGE PROCESSING

Project Advisor	MR. NAEEM AKHTAR
Status	Completed

We are developing an automatic tool that will be helpful for everyone who is attached to plants. As we'll collect datasets of all kinds of plants, therefore, detection of the type of plant will be an easy task

for the user. They only need to capture a picture of the leaf of the plant and our application will show the details about the plant with the help of this image the user can also know about the type of disease if there is any existing. With the help of this tool, we can find cures for plants after detecting diseases in them.

1141. WOMESTIGE

Project Advisor	MR. SHOAIB HASSAN
Status	Completed

As in our society women are bound in four walls and are not allowed to go out, earn money and gain financial independence due to their lack of literacy which causes lack of opportunities. If they get an opportunity in any chance they, are paid very less which is also stressful. Second problem lies on the women who are bread winner for their family and they cannot go out due their own household responsibilities. There is a societal class of people who do job or living in other cities away from their family or sensitive enough not to do household works but they have money to avail services. For the ease of those ladies and societal class we have come up with the idea of an android application that will those ladies who want to earn money by selling house-hold services/skills and it provide platform to societal class to buy services. We also add a video lecture feature where we teach people who to make handicrafts so they are able to learn and earn through Womestige application.

1142. SMART FORM FILLER FOR AUTOMATED ADMISSION SYSTEM

Project Advisor	MR. USMAN AKBAR
Status	Completed

As in the modern era everything around the World is turning into Automation. So Still Why we are not turning into Automation? We do not have any web base project that can fetch data from IDcard and automatically store information in the database. Clicking IDcard Pictures and storing into gallery or collecting IDcard then giving back is such busy and Time taking process a lot of memory is also consumed in storing images too. Here we have an idea. Fetch the information from the IDcard by using camera and store the information into the database in the form of Original IDcard. Every time an automatically form similar to the Front and back side of IDcard will be generated and fetched information will be stored in it.

1143. SHADOW ANALYSIS USING IMAGE PROCESSING, SOLAR ESTIMATION AND SUPPLY CHAIN MANAGEMENT

Project Advisor	MR. USMAN AKBAR
Status	Completed

This application is being developed to get rid of issues during installing a solar system. It will provide a single platform in which users can perform shadow analysis, track the sun's path and design the solar system according to user's needs and sell/purchase solar products through online solar store. User do not need to visit any solar company or different solar markets. Users will get all the solar-related products under the single platform.

1144. DROP FOR LIFE

Project Advisor	MR. USMAN AKBAR
Status	Completed

Drop for life is a social practice that help people to maintain their basic life. Nowadays, we see that people lose their precious life without getting the necessities of life at right time. The national poverty rate in Pakistan increase by 2.5 to 4 percentage points which means 5.8 to 9 million people into the poverty. Some of these have nothing to eat and clothes to wear, they are unable to take at least two meals in a day. About 0.75 million children are not getting education due financial issues. The aim of this application to facilitate these people by providing a platform where they easily get donation in form of food, clothes, furniture and money for education purpose.

Blood is an important factor that is very essential in the life of every organism. Millions of people lose their lives for not getting blood at the right time in emergency due to unavailability of donor or improper contact of the donors. This application Drop for life is also work as online blood bank that helps people by performing blood bank operations effectively.

Another purpose of this application some people who wants to start their work by their own, our application provides free mentorship sessions, and short courses in which they can learn some skills. Our mission behind this to provide effective guidelines.

Drop for life is also designed to support donor to donate money, food, clothes, furniture, blood and funds. The donor doesn't have need to search a needy one. The main problem that needy people face there isn't a single platform that can accommodate all the donation features, including blood donation, charitable giving, food, clothing, furniture, money donations, and education. To donate different goods, the donor needs switch across platforms. Therefore, there would be a platform that offers all these features collectively to enable simplicity for the donor and the acceptor in order to avoid this. By providing these facilities to donor and receiver it will save millions of lives every year.

1145. ADVO-LANCING

Project Advisor	MR. USMAN AKBAR
Status	Completed

Finding a good lawyer for court cases is too difficult for a man. He/she should have some references for finding a case-related lawyer and it's a possibility of breaching an agreement which causes a huge loss of money and time. Our web app will allow everyone to search for and hire a relevant lawyer through ADVO-lancing application. Our web app is not only beneficial for the client but also for newly registered lawyers, who have to work under an experienced lawyer, now they can get clients online and win cases in court to show his/her excellence.

1146. AUTOMATED TOOL FOR FYP SELECTION AND SUPERVISION

Project Advisor	MR. USMAN AKBAR
Status	Completed

1147. TRAVELHOLIC.PK

Project Advisor	MR. ZEESHAN KHAN
Status	Completed

Travelholic is a multi-vendor service, which provides marketplace for travel and tourism companies. It is a square where any travel and tourism agency open up an account and manage their services. It does provide them an opportunity to host live events. Customer can compare and choose amongst the

competitive rates offered by various agencies. This Project is itself unique and utilize a very innovative approach, which is its customized tourism system. The most interesting thing about the project; it is based upon Bid system, user will post his vocational trip requirement, vendors will bid on them, user would have choice to select among them.

1148. SENSE FAKE

Project Advisor	MS. HINA IQBAL
Status	Completed

Countering the sale of counterfeit goods is the aim of this project. User will upload a picture of a product logo, feeding it to the system from which the software will analyze that logo and give a confidence score based on how much it matches with the original one, stored in database. If the score is above or equal to 90%, then it will be recognized as an original logo, authenticating the product as genuine, otherwise it would be deemed forged.

1149. NON-TAMPERED FATS

Project Advisor	MS. RUBAB JAVAID
Status	Completed

Our project will be a website for fund allocation and tracking progress of funded projects for Nishat Groups (local domain). We are using block chain because it helps in traceability and verification of transactions. It provides a decentralized structure which will improve the security. It reduces cost for organizations. Since, it creates efficiencies in processing transactions. In order to carry out this project we would need to gain command in solidity (programming language), how the block chain works, JavaScript (programming language), web engineering. Through this project we can acquire a system of safe fund transactions, transaction records will not be able to be tampered with. The progress of funded projects can be tracked.

1150. DEFENCE DRILL

Project Advisor	MS. RUBAB JAVAID
Status	Completed

Now a days due to rampant crimes in the country which have no end in sight, ordinary citizens are being caught up in situations they are not ready for. They are unable to protect themselves and those close to them because they do not have the required skillset to remain calm and act in accordance to avoid getting hurt, robbed, or killed. To counteract that we have developed an app which has courses for beginners as well as advanced users which will provide the user with the skillset to at-least defend themselves in dangerous situations.

At the end, the results that would be acquired are: provided the user with ability to defend themselves and make a citizen not so helpless in dangerous situations anyone. Intermediate users and advanced users could be eligible for a career in mixed martial arts by participating in a tournament to test their ability according to their badge levels.

1151. BRIVE

Project Advisor	MS. SADAF BALOCH
Status	Completed

In market there is a huge gap between renters who rents the car and the buyer who took the car. Further on special occasions right car at right price is not available every time. People invest in rental businesses by parking their own cars at rental stores to rent and get passive income but in this case 25% commission is deducted from the complete rental price by the rental store. Furthermore prices to rent are very high and it is not necessary that you get car of your own choice. In market rental store are available that rents the car but they are very limited. Through our project we bring very vast society to rent the cars. There is no other solution in the market currently. Our platform enables all users to post a car at rental services in their free hours and also provide a platform for buyers to rent a car. In this way every person gets a car of its own choice in much cheaper rates. Also this platform enables the peoples to earn money by posting their car on rental service .To motivate users to rent the safe and sound.

1152. C++ SIMULATOR

Project Advisor	MS. SADAF BALOCH
Status	Completed

It is observed that sometimes teachers find it difficult to explain the same thing again and again on the whiteboard when students are unable to understand some programming concept, teachers opt to explain by drawing diagrams but the diagrams get mixed up. Students are not able to visualize concepts like memory allocation and code iteration as a result they are not good at debugging problems. Nowadays in most of the universities C++ is used as the starting point for programming students grabbing its core concepts are of utmost importance. Their interest in the field of programming depends on their understanding of the C++ language. The concepts, tools, frameworks of web development will be used to simulate C++ execution so that students are better able to understand the concepts. The end result will be a web-based application where students will be able to edit and write some line of code based on that code a graphical representation of the code will be generated.

1153. HIRING GENIE

Project Advisor	MS. SADAF BALOCH
Status	Completed

The process of screening and hiring of a candidate in any organization is a crucial task. One needs to be very vigilant when hiring new talent as they are an asset of the company. Being able to recruit right candidate for maximum efficiency in the organization lead it to success. The objective of this project is to streamline and ease up the recruitment process of any company and provide them with the best suited candidate for their job position. This will also make the company's job easier, and they can focus on other aspects of their job. The research and survey show us that the need for such an automated software for hiring and interview process is getting higher as it is getting important to have right candidates on board for the job. This project will be using knowledge areas of psychology to develop such models that can help in behavioral analysis, game development and web app development to come up as a system that is ready-to-use for the organizations to hire for their job positions.

1154. PARKINSON'S DETECTING SYSTEM USING PYTHON

Project Advisor	MS. SADAF BALOCH
Status	Completed

The Parkinson's disease is progressive neuro-degenerative disorder that has a significant effect on people's quality of life. It mostly affects the motor functions of human and the motor symptoms are

called "parkinsonism" or "parkinsonian syndrome". The symptoms of Parkinson's disease will develop gradually, beginning with slight tremoring to mental and behavioral changes, balance coordination problems, having hoarse, breathiness and tremor to voice.

In order to diagnose this disease in its early stages, we have decided to train a hybrid model for detecting Parkinson's using voice recognition and spiral drawings datasets. The deflections in the voice will confirm the symptoms of Parkinson's disease using voice, while sudden, sharp changes in spiral drawings will confirm the symptoms of Parkinson's disease using spiral drawings. In our model, a huge amount of data is collected from normal diagnosed with and without Parkinson's disease. This data is trained using machine learning algorithms. From the whole data 80% is used for training and 20% is used for testing. The data of any person can be entered in database to check whether the person is affected by Parkinson's disease or not.

1155. TRIP KARO

Project Advisor	MS. SAHER ZIA
Status	Completed

It is the App based solution as we are creating an application that will help in almost every aspect of tourism. Different problem people face while touring to find tourist sites, hotel rates, activities to do, and many more. Similar it is the same for locals to find some difficulty to have customers without wasting time while bargaining etc. It will help users to find the best tour guide/help and not only it will provide you the names of tourist sites but it will give you complete information about the place you want to visit it will provide you basic information as well as detailed information which every tourist may need while touring.

S23-CS

1156. AI-ENHANCED RESTAURANT HUB

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Completed

The project aims to enhance the dining experience by developing a website for restaurants, incorporating a QR code system. It features several modules including Customer, Admin, Control Panel, HR, Inventory, Reservation, Takeout, and Payment, along with an AI-powered menu recommender. This system allows customers to easily access the menu and place orders by scanning a QR code, streamlining restaurant operations and improving customer satisfaction.

1157. PREDICTION OF METHYL GLUTAMINE SITES USING NEURAL NETWORK AND CHOU'S 5 STEP RULE

Project Advisor	DR. SHAZIA SAQIB
Status	In Process of Completion

The project centers on enhancing the prediction accuracy of methyl glutamine sites in the human body, crucial for understanding protein functions and developing targeted cancer treatments. Methylation, a biochemical process integral to most body functions, significantly influences cancer progression. Glutamine, a key protein component and essential amino acid, plays a vital role in ammonia removal, immune system support, brain function, and digestion. It is particularly susceptible to methylation through Post-translational Modification (PTM), acting as a primary defense against cancerous cells.

The proposed method merges neural networks with Chou's 5-step rule to advance cancer prevention by protecting the immune system.

1158. T VIRUS

Project Advisor	MR. ASIF FAROOQ
Status	Completed

"T-Virus Unleashed" is a dynamic video game set in a post-apocalyptic world devastated by the T-Virus. Players, as skilled survivors, navigate treacherous environments to uncover secrets, combat infected creatures, and seek a cure for humanity. The game combines action, survival, exploration, and strategic gameplay. Players, as the protagonist, explore a decaying, infected city, scavenge resources, craft supplies, and engage in tactical combat with mutated foes. Featuring an open-world environment, the game offers extensive exploration opportunities in a city filled with dangers and discoveries. Interaction with non-playable characters enriches the narrative, presenting moral choices and alliances that influence the game's direction.

1159. MOTOR VEHICLE REGISTRATION SYSTEM ON A CONSORTIUM BLOCK-CHAIN

Project Advisor	MR. ASIF FAROOQ
Status	Completed

The project focuses on developing a Motor Vehicle Registration System enhanced by blockchain technology, aiming to improve security and efficiency. Utilizing blockchain's immutability, transparency, and decentralization, it addresses current registration system challenges. The system incorporates a distributed ledger and smart contracts, ensuring trust, accuracy, and reduced errors. This approach allows secure and transparent verification of registration information by users and regulatory bodies. Core elements include the blockchain framework, registration processes, data storage, user roles, and system integration. The expected outcomes are heightened security, reduced fraud, increased efficiency, and enhanced stakeholder trust, contributing to the digitization of government services.

1160. E-COURT MANAGEMENT SYSTEM

Project Advisor	MR. ASIF FAROOQ
Status	Completed

The E-Court Management System is designed to tackle inefficiencies in traditional court systems by digitizing case information, automating administrative tasks, and enhancing accessibility. This initiative addresses significant issues like delays in justice and challenges in accessing crucial information. The project will utilize expertise in software development, database management, user interface design, and security implementation. Expected outcomes are improved case management and streamlined data and time management, leading to a more efficient and effective court system.

1161. BATTLE FOR AGES

Project Advisor	MR. ASIF FAROOQ
Status	Completed

"Battle for Ages" is a real-time strategy game that involves guiding a civilization through historical eras. The project's key challenge is developing a dynamic enemy AI that adjusts to various difficulty levels. Additionally, it focuses on creating captivating slideshow animations and optimizing the mobile

user interface. The game underscores the persistent absence of world peace throughout history. Skills required include game development, AI programming, 2D animation design, and mobile UI optimization. The expected outcomes are challenging gameplay, intelligent AI, engaging era transitions, and a responsive mobile interface. The game aims to offer an immersive historical experience, highlighting continuous conflicts across different ages.

1162. CRIME REPORT

Project Advisor	MR. AATHER SULEMAN
Status	Completed

This project involves developing a mobile app to raise public awareness about crime incidents and simplify the crime reporting process. Traditional crime reporting methods, like calling emergency services or visiting police stations, can be inconvenient or inaccessible, leading to underreporting and a lack of community engagement. Often, individuals avoid reporting due to the time-consuming process, concerns for personal safety, or unawareness of criminal activity in their area. The app aims to address these issues by enabling users to easily report crimes using GPS technology to pinpoint their location. Users can submit a report with a description of the incident and optionally include photos. The app's goal is to enhance community safety and awareness by streamlining the reporting process.

1163. GI TRACT IMAGE SEGMENTATION IN MR-LINAC CANCER TREATMENT

Project Advisor	MR. AWAIS M. LODHI
Status	Completed

This research focuses on automating the segmentation of stomach and intestines in MRI scans using deep learning, to improve radiation therapy for gastrointestinal cancer patients. The current manual process, involving MRI and linear accelerator systems, is time-consuming and labor-intensive. The study proposes using four CNN-based models: UNet, UNet++, VNet, and Mask R-CNN, trained on a dataset from UW-Madison Carbone Cancer Center. The models will be evaluated using metrics like dice coefficient and IoU. Anticipated outcomes include precise segmentation, reduced workload for radiation oncologists, and better treatment results for patients. This research advances medical image segmentation, benefiting both research and medical communities by enhancing care for gastrointestinal cancer patients.

1164. HIRE AN EXPERT

Project Advisor	MR. FARAZ ALI
Status	Completed

The application includes resources to help a person with his daily life problem. This app will help make the process fast to solve daily life problem. This app offers several daily life solutions where experts and the person both have their account where they have to sign up first to interact with each other. They have a secure method for fund transfer. Customer have to register first to solve the respective problem anytime.

1165. URDU VOICE CHATBOT APPLICATION

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

This project aims to create an Urdu voice chatbot on Flutter, integrating Dialogflow and a real-time database. Targeting Urdu speakers, it seeks to bridge the language accessibility gap in technology. The chatbot will allow natural voice interactions, enhancing user experience. Key areas include natural language processing, voice recognition, Flutter development, Dialogflow integration, and real-time database handling. The expected result is a functional Urdu chatbot, facilitating voice-based queries and responses, and maintaining conversation history. This will make technology more accessible and user-friendly for Urdu-speaking communities.

1166. PET-TECH: ADVANCED PET CARE SOLUTIONS

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

"Pet-Tech: Advanced Pet Care Solutions" is a web app using machine learning to identify pet breeds from images, offering personalized nutrition advice and a comprehensive vaccination guide. It helps pet owners stay updated with pets' health needs and facilitates pet product purchases through a smart recommender system, comparing prices across retailers. The app aims to enhance pet care by providing tailored guidance, easy access to vaccinations, and pet accessories, improving pets' health and quality of life.

1167. PROJECTFLOW: STREAMLINING THE FINAL YEAR PROJECT PROCESS

Project Advisor	MR. IMRAN ARSHAD CH.
Status	Completed

"PROJECTFLOW: Streamlining the Final Year Project Process" is an innovative solution designed to simplify and optimize the management of final year academic projects. It offers tools for tracking progress, facilitating communication, and resource allocation, thereby enhancing efficiency and collaboration between students, supervisors, and institutions in the project completion journey.

1168. THE SIGNAL AND THE WRITER

Project Advisor	MR. IRFAN ANJUM
Status	Completed

"The Signal and the Writer" is a video game blending mystery and exploration, where players become a writer who discovers a reality-altering signal. Tasked with rescuing their spouse from Mother Miranda after a mysterious abduction, players navigate a thrilling adventure. The game intertwines immersive storytelling and the unique power of words, challenging players to uncover the signal's secrets to save their loved one.

1169. AQUARIUMISH

Project Advisor	MR. IRFAN ANJUM
Status	Completed

Aquariumish is a mobile application designed to help aquarium owners to monitor and manage their aquariums virtually. It provides a tank calculator which calculates aquarium tank volume, CO₂, and <S25BS005>

water hardness by taking dimensions and units. It allows user to watch their aquarium from anywhere by using an aquarium camera which is linked to a network. Moreover, users can easily get all information about any fish.

1170. EDU-EVENTUM

Project Advisor	MR. JAWAD HASSAN
Status	Completed

Edu-Eventum is a web application that offers a range of features tailored to the unique requirements of educational events. This web application is designed using HTML, CSS, REACT, NODE.JS and MYSQL. Edu-Eventum is a comprehensive platform designed for organizing and managing educational events. This platform will let you design posters and flyers for event organizers, a feature to notify users (students/faculty) about upcoming events, notify sponsors to find events suitable to their sponsorship interest and lastly users (students/faculty) will be able to register and pay their registration fee via this directly to the event host.

1171. PERIODIC TABLE AND REACTIONS SIMULATOR

Project Advisor	MR. JAWAD HASSAN
Status	Completed

The project is developing a multiuser web application as a complete reactions simulator, using technologies like HTML, CSS, Bootstrap, React JS, and Django. It aims to enable virtual chemical reactions between various elements and compounds, allowing users to control conditions like temperature and catalyst use. The focus is on an intuitive interface, accurate reaction mechanisms, and visualizing reactions and results. Combining chemistry, web development, and UI design, the simulator serves as an educational tool for studying reaction kinetics and the impact of different variables.

1172. PREDICTION OF PTM SITE OF N-ACETYL THREONINE USING NEURAL NETWORK

Project Advisor	MR. KAMRAN SHABBIR
Status	Completed

The project aims to develop a neural network-based approach for the prediction of PTM sites involving N-acetyl threonine. By successfully predicting these modification sites, we can enhance our understanding of protein function, cellular processes, and disease mechanisms. The results obtained from this project will contribute to the field of PTM analysis and provide valuable insights into the regulatory networks governing protein behaviour.

1173. GRAPHICAL & MATHEMATICAL MODEL OF SVD & PCA

Project Advisor	MR. LIAQUAT MAJEEED SHEIKH
Status	Completed

This research focuses on comparing Singular Value Decomposition (SVD) variants—randomized, truncated, and incremental SVD—for anomaly detection in network traffic time series data to enhance cybersecurity. It addresses the challenge of accurately detecting anomalies in increasingly complex

network traffic. Key areas include matrix factorization, time series analysis, cybersecurity, and anomaly detection. The goal is to identify the most suitable SVD variant for network traffic anomaly detection, evaluating their accuracy and computational complexity. Results will contribute to more robust network security systems, bridging the gap between SVD and cybersecurity, and offering insights for future research and applications in the field.

1174. GO BLIND

Project Advisor	MR. MOHSIN ABBAS
Status	Completed

The Go Blind Messenger app offers an accessible messaging platform for blind users, featuring text and voice messaging, contact management, and group chats. Designed inclusively with text-to-speech, screen reader compatibility, and voice recognition, it aims to empower blind individuals by enhancing their communication, independence, and social connections.

1175. SMART TRAFFIC SYSTEM

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	Completed

In this project our goal is create a Smart Traffic system that allows better navigation of the traffic routines and problems we suffer everyday due to travel. There is ill management and timed sequence signals which do not cater properly resulting in hours in traffic jams and cause serious major issues and in case of any emergency due to poor signaling it disrupts with the traffic overall and causes further issues and can also lead to potential loss. That is why we have decided to work on a smart traffic system that allows better signaling and routing of our roads.

1176. A COMPLICATED GUY

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	Completed

Dive into a vast, captivating open-world game filled with stunning landscapes, dynamic cities, and wild terrain. It offers a mix of exploration, strategy, and exciting gameplay, where your problem-solving skills shape the story. The game features an innovative control system developed using Unity's new input system.

1177. RACE AT MARS

Project Advisor	MR. MUSTAFA HASSAN
Status	Completed

"Race at Mars" is a multiplayer metaverse racing game set on Mars, inspired by "Death Race". Players engage in high-speed races across dangerous Martian terrains, battling both players and Martian aliens. The game features a dynamic weather system with sandstorms and extreme temperatures, adding to the challenge. Central to the game are intense races, customizable vehicles equipped with weapons and gadgets, and a variety of vehicles for different playstyles. Players unlock new vehicles, upgrades, and cosmetics by winning races and completing missions, continuously enhancing their racing abilities in this immersive, futuristic environment.

1178. EZZ PAY

Project Advisor	MR. NADEEM TARIQ
Status	Completed

The number of online banking apps has increased significantly due to various types of fraud starting to occur and it consumes more time. The goal of our project is to optimize the users' time and protect them from frauds, or project provides features such as QR codes, messaging, and review system. Messaging can be used to communicate with the seller or buyer so miscommunications could be reduced. QR codes could help optimize time and review systems could help the buyer or seller to check if the party they are dealing with is legit or fraud by checking the person's review which other people can give who have dealt with them in the past. Due to the issues stated above it was decided to create an app that performs a variety of secure activities such as stated.

1179. FOODCRITIC

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

"FOODCRITIC" is a digital platform designed to revolutionize the culinary experience by offering comprehensive restaurant reviews and ratings. Users can explore diverse dining options, share feedback, and make informed decisions. The project leverages user-generated content to create a community-driven guide, enhancing the dining landscape for food enthusiasts and restaurants alike.

1180. SPECIALIST AT ONE'S DISPOSAL

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

The medical assistance app revolutionizes healthcare by connecting patients with doctors through a comprehensive platform. It offers virtual consultations, appointment scheduling, secure payments, and medical resources. With user-friendly interfaces, the app facilitates easy access to specialized doctors and provides immediate support via chat-box and life-saving videos. Challenges include ensuring data security and optimizing performance. Focused on usability, reliability, and security, the app aims to improve healthcare access, patient-doctor communication, and emergency preparedness, transforming medical service delivery and enhancing patient outcomes.

1181. AUTOMATED HEMORRHAGE DETECTION AND CLASSIFICATION

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

This project addresses the challenge of detecting and classifying intracranial hemorrhage (ICH), a severe condition causing bleeding within the skull. Utilizing deep learning, computer vision, and medical imaging analysis, the team aims to develop a model for identifying and classifying ICH subtypes. The model, employing Transformer architecture and transfer learning, will efficiently detect and classify hemorrhage types, visualizing them on CT scans. This approach seeks to improve computer-assisted diagnosis for ICH, significantly contributing to the field of medical imaging.

1182. TALAASH (SEARCHING YOUR BELONGINGS)

Project Advisor	MR. SYED NISAR BALTI
Status	Completed

The TALAASH App is a mobile application designed to streamline the process of reconnecting individuals with their lost belongings. By leveraging smartphone technology, geolocation, and a user-friendly interface, the app creates a centralized platform for reporting and searching lost items. Users can register lost possessions with detailed descriptions and images, stored securely in a database accessible to both users and administrators. The app's search functionality, including intelligent matching algorithms, improves the efficiency of finding matches. Integration with social media platforms enables users to expand the reach of their search. The app prioritizes privacy and security through encrypted data transmission and optional disclosure of personal information. The TALAASH App offers a convenient and effective solution to the longstanding problem of lost items, revolutionizing the recovery process and mitigating distress for users.

1183. FWEC MANAGER

Project Advisor	MR. USAMA PERVAIZ
Status	Completed

"FWEC Manager" is a project focused on developing a comprehensive management system. It integrates advanced technologies to streamline operations, enhance safety, and improve efficiency. The system offers monitoring, targeting a seamless, sustainable, and productive experience.

1184. PERSONALITY PREDICTION USING DEEP LEARNING

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

The project proposes a multimodal personality trait recognition method, integrating audio-visual modalities with a hybrid deep learning framework combining CNN, Bi-LSTM, and Transformer networks. It utilizes pre-trained deep audio and face CNN models for high-level feature extraction from audio and video. These features are processed through Bi-LSTM and Transformer networks for long-term temporal dependency analysis, generating comprehensive audio and visual features. The approach includes linear regression for individual audio and visual-based personality trait recognition and a decision-level fusion strategy for final Big-Five personality scores and interview scores, advancing the understanding of psychological characteristics.

1185. MEDEMERGE

Project Advisor	MR. USMAN AAMER
Status	Completed

The MedEmerge mobile app, utilizing React, Node.js, Firebase, and Google Cloud Platform, aims to improve access to emergency medical assistance. It addresses challenges like traffic, resource limits, and communication barriers that impact patient outcomes. Features include GPS-based ambulance tracking, real-time medical communication, and a blood donor finder. React ensures a responsive interface, Node.js enables real-time data processing, and Firebase offers secure data storage. Google Cloud Platform enhances GPS accuracy for ambulance tracking. MedEmerge strives to provide a user-

friendly app to improve emergency response times and patient care, potentially saving lives by connecting users with essential services.

1186. CAR REPAIR-ALLAY

Project Advisor	MR. USMAN AAMER
Status	Completed

The Car Repair Allay mobile app is designed to simplify car repair management for vehicle owners. It offers a user-friendly platform to schedule appointments, track repairs, receive cost estimates, and handle payments via mobile devices. This app aims to streamline the car repair process, providing a seamless experience for users. Leveraging mobile technology, it enables informed decision-making and easy interaction with repair shops, enhancing convenience for car owners.

1187. SIGN-ANALOGY

Project Advisor	MR. USMAN AAMER
Status	Completed

Sign Analogy is a mobile app designed to help individuals with hearing impairments communicate more effectively. It uses computer vision and machine learning to translate sign language into written text in real-time. The app focuses on precise recognition and translation through computer vision, machine learning, and natural language processing. Its goal is to improve inclusivity and accessibility, providing a reliable tool for sign language translation. The expected outcomes are accurate sign language recognition, efficient translation, and enhanced accessibility. The project emphasizes breaking down communication barriers and fostering a more equitable society for those with hearing impairments.

1188. SKILL CONNECT

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

This project develops an app for students and companies, facilitating job searches and skill improvement. It features a recommendation system for jobs and courses, tailored to students' interests and qualifications, and includes job-specific assessment tests to ensure readiness before applying, ultimately aiding students in their career development.

1189. SUGARCANE LEAF DISEASE DETECTION USING DEEP LEARNING

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

This project aims to improve the detection of sugarcane leaf diseases using deep learning, addressing challenges in traditional, labor-intensive methods. An extensive dataset of diseased sugarcane images from various Pakistani sugar mills is used to train the deep learning model. The methodology includes using different feature extractors and classifiers, with Orange software aiding in data analysis and visualization. The research seeks to enhance disease prediction models, providing a reliable tool for disease monitoring and control. New CNN models are introduced for comparative analysis, and the software system is designed to be user-friendly with comprehensive visual reports. Challenges include hardware limitations and security concerns, assuming access to diverse datasets and expert

collaboration. This project aims to support timely agricultural interventions and further research in the field.

1190. LIVER DISEASE DETECTION USING DEEP LEARNING

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

This project aims to develop a liver disease detection system using deep learning, focusing on ultrasound and CT images to identify liver cancer. Utilizing deep learning algorithms, it aims to classify liver disease cases accurately for timely treatment. The system trains various models, including YOLOv7 and MRCNN, on a dataset of preprocessed images, and develops a hybrid CNN-SVM model for better accuracy. Techniques like data augmentation and regularization are employed to reduce false positives. The project's outcomes will aid healthcare professionals in early diagnosis and treatment, contributing significantly to medical image analysis and enhancing patient care in liver disease management.

1191. MI-BUD (MAKE PEOPLE TALK)

Project Advisor	MR. USMAN AHMED RAZA
Status	Completed

"Mi-Buddy" is a voice bot project designed for introverts, focusing on creating an interactive, empathetic bot that recognizes and responds to their tone. It aims to provide comfortable communication and tailored recommendations to support well-being. Introverts often face challenges in initiating conversations and social interactions, and existing voice bots don't address their specific needs. Mi-Buddy will use natural language processing, sentiment analysis, and machine learning to understand user speech and offer empathetic, personalized responses. The goal is a functional prototype that engages introverted users effectively, helping them in socializing and providing emotional support, ultimately enhancing their communication skills and self-confidence.

1192. UCPIAN - AN INTERACTIVE APPLICATION FOR UCP

Project Advisor	MS. FAIZA KHADIM
Status	Completed

The UCPian Game is a mobile app designed to enhance the university experience for University of Central Punjab students. It features a 3D virtual representation of the UCP campus, aiding especially out-of-town students. Users can navigate the campus, access information, and participate in activities. The app includes analytical reporting with heat maps of the most visited places, aiding resource optimization. An AI-based chatbot assists with university information, and unanswered queries are reported to the help desk for updates. Future updates will integrate the student portal for accessing fee challans, schedules, and grades, making UCPian a comprehensive tool for university navigation and engagement.

1193. SMART PARKING SYSTEM

Project Advisor	MS. FAREEHA IQBAL
Status	Completed

The Smart Parking System uses image processing to detect vehicle number plates and verify them against a backend database, simplifying parking space allocation. It replaces traditional sensors with

computer vision algorithms for number plate analysis. Users input their vehicle number into a mobile app, which confirms available spots and guides them in real-time. The project's goals are to develop an effective number plate recognition algorithm, a responsive app, and a robust backend for data management. Expected outcomes include accurate number plate recognition, a user-friendly app, and a backend for real-time data processing and spot allocation, aiming to optimize parking and reduce congestion.

1194. OPERATION: FREEDOM STROM

Project Advisor	MS. SIDRA KHALID
Status	Completed

"Alpha Team: Bunker Assault" is an action-packed shooter game set in a high-stakes military operation. Players control Commando Jax, leading his team through strategically designed bunkers with the goal of completing the mission. The game emphasizes shooting mechanics, challenging players with intense firefights against AI-driven enemy forces that dynamically respond to player actions. Developed using Unity and C#, and with environments and character models crafted in Blender, the game boasts detailed and realistic assets. The combination of an engaging storyline, dynamic enemies, and immersive gameplay aims to provide a thrilling shooting experience, keeping players captivated as they navigate the challenging mission.

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1195. CRYPTO TRADER

Project Advisor	DR. ABDULLAH YOUSAFZAI
Status	Completed

Crypto Trader is an app designed to automate cryptocurrency trading, focusing on arbitrage trading using market data from decentralized exchanges. It compares crypto prices across platforms, executing trades to capitalize on price differences. The app employs flash loans from DeFi platforms like Aave, requiring immediate repayment post-trade. Users receive notifications on trade outcomes and can view past trade histories. This tool aims to streamline crypto trading, offering a sophisticated, user-friendly solution for efficient market operations.

1196. DEVELOPING A DEEP LEARNING MODEL THAT WILL PLAY GAMES USING ML

Project Advisor	MR. ADEEL ARIF
Status	Completed

Artificial intelligence, advancing rapidly, now tackles tasks once deemed impossible. With 90% of the world's data generated in the last two years, training AI models with such vast data isn't always feasible. Reinforcement learning, where an agent learns from its environment, offers a solution. This project applies reinforcement learning to create a deep learning model that plays games like humans. Specifically, the model will be trained to play retro versions of Street Fighter, a combat game, and Doom, an FPS game, using reinforcement learning to choose optimal actions and achieve goals, demonstrating AI's versatility in learning complex tasks.

1197. REAL-TIME FAST ADAPTIVE SOLUTION TO READ HANDWRITTEN DATA IN AN IMAGE

Project Advisor	MR. ADEEL ARIF
Status	Completed

This project develops a system to recognize handwritten text from images, including notes and documents. It will identify alphabets, digits, special characters, and mathematical expressions, converting them into editable PDFs and Word files, and generating printable documents. Utilizing OCR and machine learning, the aim is efficient digital conversion of handwritten text, saving time and effort in transcription. The project encompasses image processing, pattern recognition, machine learning, natural language processing, and document processing to handle diverse handwriting, document types, and languages. The expected outcome is a system capable of accurate recognition and digital conversion, evaluated by recognition accuracy, speed, and usability, significantly enhancing productivity and accessibility to handwritten data.

1198. PROMOTING TOURISM VIA AUGMENTED REALITY "TOURISMVERSE"

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

The project involves creating a multifunctional Android app that offers a blend of informational content, AR-based gaming, and 3D virtual tours. Users can search for places, read reviews, and engage in a game where they complete tasks by collecting items based on system guidance. Scores are displayed on a scoreboard, with top players winning a free tour. Additionally, the app features a virtual tour module, allowing users to explore places in 3D, enhancing the overall experience. This versatile app aims to provide a comprehensive digital experience, combining practical information, interactive gaming, and immersive virtual exploration.

1199. PROPMATCH.PK

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

PropMatch.pk is an online real estate platform designed for high-end properties, aiming to transform property transactions with convenience, transparency, and efficiency. It features user account management, verified property listings, financial analysis, automated pricing, and premium property management services. The platform also offers rental invoicing, online payment options, and a community for networking. Focused on the elite market segment, it will provide advanced technology and API integration for scalability, security, and performance. Key features include visual presentations, mortgage calculators, discussion forums, and location-based alerts, catering to administrators, customers, dealers, and investors in the real estate industry.

1200. FITHUNT

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

This project aims to develop a mobile application that facilitates personalized fitness and nutrition management for users. The application incorporates various features to enhance the user experience and promote a healthy lifestyle. The key features of the application include personalized diet plans, an

online registration system, an online payment system, a push notification system, a variety of exercises, gym location and navigation with visual representations of the environment, workout tracking, an exercise library, progress tracking, nutrition tracking, social features for collaboration with gym members, and personal trainer interaction. These features collectively empower users to set and achieve their fitness goals effectively, while offering a seamless and engaging experience through mobile technology. The application intends to revolutionize the way individuals manage their fitness routines and nutrition plans, promoting a healthier and more active lifestyle in the process.

1201. E-COMMERCE WEB BASED APPLICATION WITH RECOMMENDER SYSTEM

Project Advisor	MS. SAHER ZIA
Status	Completed

Our project is aimed at developing a Web-based application named WBAI for managing the purchasing purpose more efficient for buyer. It helps to keep the detailed information of the recommended product which are visible on our website with the involvement of a Recommendation AI system. This system can be used to recommend other related precuts and their details of the stock availability, Update the inventory based on the sales details. It will include minimize the errors while recording the stock. It will help to make the system easily managed and secured. This project is aimed to solve different problem affecting to direct customer needs and their purchasing management.

1202. CRIME MATRIX

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Completed

The Crime Matrix project is a web-based application integrating Google Maps to display nearby crime incidents. It aims to provide accessible, real-time crime data, enhancing individual empowerment and public safety. The application focuses on crime prevention and awareness, using web development, data integration, GIS, and UI design for a user-friendly experience. It offers real-time updates on crime incidents, assisting in informed decision-making. This project supports public safety and community awareness, aiding precautionary measures, law enforcement resource allocation, and targeted crime prevention strategies.

1203. LEARNING & HIRING.COM

Project Advisor	MR. AHSAN AZHAR
Status	Completed

The Learning and Hiring Website is a comprehensive platform designed for personal and professional development. It offers a robust learning experience tailored to evolving market demands, enabling users to upskill effectively. Beyond learning, the platform revolutionizes hiring by providing a flexible assessment tool for tech companies, universities, and colleges to conduct aptitude and coding tests. This feature generates detailed analysis reports, offering valuable insights into candidate capabilities. Integrating both learning and hiring aspects, the platform creates a transformative ecosystem that fosters individual growth and streamlines talent acquisition, helping users stay competitive in a rapidly changing job market.

1204. BYSO (BEFORE YOU STEP OUT)

Project Advisor	MR. AHSAN AZHAR
Status	Completed

BYSO is a skincare website leveraging a questionnaire and image processing algorithms to analyze users' skin types and concerns. It recommends suitable skincare products from various brands, covering cleansing, moisturizing, and treatment for specific issues. Beyond product recommendations, BYSO offers educational resources, enhancing users' understanding of skincare. This approach aims to guide users in making informed skincare choices, creating an engaging and informative experience. BYSO's personalized skincare recommendations have the potential to significantly change how people approach skincare, making it a valuable tool for personalized skincare guidance.

1205. FLEXSPACE

Project Advisor	MR. MOHSIN SAMI
Status	Completed

FlexSpace is a platform designed to support freelancers in Pakistan, offering easy booking of equipped office spaces and a car pick-and-drop service to address transportation issues. This solution targets freelancers needing professional environments for meetings and collaboration, tackling the distractions and isolation of home-based work. The project combines workspace management, logistics, customer service, user experience design, and backend infrastructure development. FlexSpace will provide fully equipped offices, enhancing productivity and professional conduct. The added transportation service aims to ensure punctuality and reduce commuting stress, while catering options support workday sustenance. FlexSpace's goal is to enhance productivity, collaboration, and provide a conducive work environment for freelancers.

1206. SWIFTSAIL

Project Advisor	MR. MOHSIN SAMI
Status	Completed

SwiftSail is a dynamic e-commerce marketplace designed to meet the evolving challenges of digital commerce. It focuses on enhancing customer satisfaction and increasing seller efficiency. Recognizing the complexities in buyer-seller processes and the competitive global market, SwiftSail introduces innovative features like a Review Management System, SmartSize, and Inventory Space Allocation. The Review Management System facilitates interaction between customers and sellers, promptly notifying sellers of negative reviews for quick resolution, thereby improving customer satisfaction and seller ratings. SmartSize aims to ensure customers get perfectly fitting clothes, reducing returns due to size issues. Inventory Space Allocation assists sellers in finding optimal storage for their products, streamlining their online store management. SwiftSail's approach is to address the critical needs of both customers and sellers, aiming to redefine the e-commerce marketplace experience.

1207. PLAYTIME RENTALS

Project Advisor	MR. MOHSIN SAMI
Status	Completed

The project aims to create an online platform for booking indoor and outdoor physical games, addressing the inefficiencies in current reservation processes. As demand for physical games rises, this centralized platform will simplify the browsing, reservation, and rental experience for users. The platform will leverage app development, database management, UX design, and communication systems to offer features like game browsing by type, location, and time, along with reservation confirmations and conflict prevention notifications. It will facilitate communication for outdoor games, include a registration fee system, and schedule matches effectively. A rating and review system will ensure transparency and quality. The expected outcome is a user-friendly platform that makes booking physical games easier, fostering a community of game enthusiasts and promoting the accessibility and growth of physical game activities.

1208. CORE: GEOLOCATION BASED PLATFORM FOR REAL-TIME COMMUNITY UPDATES AND VOLUNTEERS ENABLED RESCUE SERVICES

Project Advisor	MR. MOHSIN SAMI
Status	Completed

CORE is a decentralized collaboration platform for local communities to share updates and assist each other in emergencies. It's a geo-location-based, community-driven system where users see local content, increasing engagement by filtering irrelevant data. The platform features a social feed for sharing and verifying local happenings. A key function is quick rescue management; users can alert nearby individuals and organizations in emergencies like accidents. The project combines decentralized systems, geo-location, real-time communication, and emergency management, aiming to strengthen community ties and facilitate rapid assistance during critical situations.

1209. LINUX-SERVER METRICS MANAGEMENT

Project Advisor	MR. NABEEL AHSAN
Status	Completed

The increasing popularity of Linux necessitates the development of a reliable Linux Monitoring System (CMS) to effectively manage complex servers. This CMS collects real-time metrics, including CPU usage, memory usage, network traffic, and disk I/O, providing valuable insights into the system's performance. Leveraging this data, the CMS performs real-time analysis to identify potential issues and troubleshoot problems promptly. By implementing a comprehensive Linux Monitoring System, administrators gain the ability to closely monitor server metrics, identify areas of performance deficiency, and make informed decisions to enhance overall server performance and resource allocation. This project addresses the significant problem of managing Linux servers efficiently and contributes to knowledge areas related to server monitoring, performance optimization, and resource management. The expected results include improved server performance and streamlined operations in Linux-based environments.

1210. 2 TIME

Project Advisor	MR. NABEEL AHSAN
Status	Completed

In a struggling economy, relying on a single job poses financial stability and job security challenges. Economic downturns often lead to reduced hours or layoffs, impacting those with one income source. To mitigate these risks, individuals can adopt several strategies. Seeking additional income sources can create a financial safety net against job loss or reduced hours. Effective expense management,

budgeting, and saving provide a buffer for unforeseen job losses or pay cuts. Upskilling and staying informed about job opportunities can improve prospects for better or higher-paying jobs. However, it's important to ensure that taking a second job doesn't breach employment agreements or conflict with the primary job, as some employers restrict external work engagements.

1211. FRAUD GUARD

Project Advisor	MR. NABEEL AHSAN
Status	Completed

Fraud Guard is a web application that detects fake reviews and transactions using machine learning. As online fraud increases, Fraud Guard analyzes user behavior, review content, and transaction patterns to identify fraud. It involves collecting a dataset for training models, focusing on user profiles, review content, and transaction details. The app offers a user-friendly interface for businesses to monitor and address fraud. Fraud Guard aims to increase trust and reliability in online platforms, protecting businesses and consumers from fraudulent activities.

1212. LNGM (LOAD'N, GO MOVERS!)

Project Advisor	MR. NABEEL AHSAN
Status	Completed

It is a web base application which provide efficient, safe and reliable transportation and relocation services for customers who need to move their household items and other goods. By using this app user will book full move with labor to relocate their good. This App takes away hassle of locating a vehicle outside and haggling for the rates.

1213. HRIS

Project Advisor	MR. RAO FAIZAN
Status	Completed

The project aims to develop a Human Resource Information System (HRIS) using Microsoft's Power Platform, addressing challenges in HR management like manual data entry and limited self-service. Utilizing Power Apps, Power Automate, and Power BI, the HRIS will streamline HR processes and automate workflows. Key functionalities include employee management, leave management, performance reviews, and analytics. This modern, customizable system will enhance operational efficiency, improve data accuracy, and provide valuable HR insights. The outcome will be a fully functional HRIS that improves employee satisfaction, supports data-driven decisions, and ensures compliance, transforming HR operations and empowering users with comprehensive data insights.

1214. CARE AND AWARE

Project Advisor	MR. TAIMOOR HASSAN
Status	Completed

This platform addresses health issues women often hesitate to discuss. It educates and empowers them with resources to tackle hidden health concerns using educational videos, visual aids, and suggestions. A discussion forum offers a safe space for women to share experiences and advice, especially on sensitive topics. The platform connects women with female healthcare professionals, listing local specialists and facilitating home sample collection and medication delivery. It features a rating system for users and service providers, discount coupons, and a user-friendly wallet for payments. Secure <S25BS005>

account registration ensures a trusted environment, aiming to empower women with knowledge and community support.

1215. SPOTFINDER - A INTELLIGENT PARKING SOLUTION

Project Advisor	MR. TAIMOOR HASSAN
Status	Completed

Our innovative parking app provides a user-friendly solution for finding, reserving, and managing parking spots. It features real-time updates, a secure payment gateway, and land registry verification via the online land revenue department for reliability. Users can filter searches for bike or car spots, and rate and review spaces, enhancing community feedback. The app includes an admin panel for managing listings, tracking transactions, and analyzing occupancy rates. Integrating SQL Server Management Studio, AWS EC2, AWS S3, .NET SDK, Docker Hub, GitHub, and VS Code ensures robust performance and scalability. This app aims to simplify parking space management and enhance user convenience.

1216. FOODOCITY

Project Advisor	MR. TAIMOOR HASSAN
Status	Completed

Foodocity is a web-based platform designed to tackle food wastage by connecting restaurants or food chains with NGOs and farmers. It aims to reduce food wastage and hunger by enabling efficient distribution of surplus food. The platform allows food chains to list excess food, which NGOs can purchase, and farmers can buy for composting, turning waste into fertilizer. This project leverages web development for the interface, database management for food availability updates, and logistics coordination. Expected outcomes include streamlined food selling, reduced wastage, and better access to food for those in need. Foodocity combines technology and collaboration to positively impact the environment and food security.

1217. IOT BASED SHOPPING CART

Project Advisor	MR. USMAN AKBAR
Status	Completed

The IoT technology is transforming retail with automated shopping carts, which integrate IoT devices and sensors to streamline shopping. This literature review focuses on the benefits, challenges, and future prospects of these carts. Benefits include enhanced efficiency, shorter checkout times, and improved customer experience. Challenges involve high costs, privacy issues, and technical complexities. Successful retail implementations show their transformative potential. The review concludes that with further advancements like AI and machine learning integration, IoT automated shopping carts could revolutionize customer shopping experiences and retail operations, indicating a promising future for this technology in the retail sector.

1218. SHOPPING MALL BRAND LOCATER

Project Advisor	MR. USMAN AKBAR
Status	Completed

The Shopping Mall Brand Locator app enhances the shopping experience by helping users navigate large malls using advanced technologies like LIDAR and camera-based scanning. Users can search for
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stores, access store information, and navigate using virtual arrows overlaid on their camera feed. The app offers features like displaying ongoing promotions, viewing product listings, and providing estimated arrival times. It utilizes LIDAR for precise location determination on compatible devices, while also supporting camera-based scanning for broader accessibility. This app aims to simplify shopping with its user-friendly interface, real-time navigation, and promotional insights, catering to a wide range of shoppers.

1219. ACCOUNTIUM

Project Advisor	MS. SARAH JAVAID
Status	Completed

Accountium is an online marketplace for buying, selling, and auctioning custom game accounts from platforms like Steam and Origin. It aims to provide a secure, global platform for users to confidently conduct transactions. Users can create detailed listings, set prices, and specify selling preferences, while buyers can filter accounts to find the right match. The platform emphasizes an intuitive interface, secure authentication, robust data encryption, and trusted payment integration, ensuring transaction security and an enhanced user experience.

1220. TURF PROPERTY SPOTTER

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	Completed

The platform combines booking indoor sports facilities and real estate properties into one centralized system. It addresses the challenges of accessing indoor sports venues and finding suitable real estate by offering a comprehensive solution for both. Users can effortlessly browse and book facilities for activities like basketball and tennis, while also exploring residential and commercial property listings. The end product is a user-friendly software platform that streamlines the search and booking process, supported by a database for property details, user profiles, and bookings. It caters to sports enthusiasts and those in the real estate market, simplifying their experience.

1221. PANAGAH MANAGEMENT SYSTEM

Project Advisor	MS. MAHAM MEHER AWAN
Status	Completed

The "PANAGAH MANAGEMENT SYSTEM" project aims to develop an efficient digital solution for managing shelters and welfare facilities. It focuses on streamlining operations, record-keeping, and resource allocation, ensuring effective service delivery. The system integrates user-friendly interfaces and data analytics to enhance management and support for vulnerable populations.

1222. RENTAL PROPERTY SYSTEM USING BLOCKCHAIN

Project Advisor	MS. MAHAM MEHER AWAN
Status	Completed

The blockchain-based rental system revolutionizes the rental industry using blockchain technology for transparency, security, and decentralization. Renters can search, apply, and pay for rentals via blockchain, while providers manage properties and agreements securely. Features include smart contracts for automated agreements and a tamper-proof decentralized ledger. This system addresses issues like fraud and inefficient intermediaries, enhancing efficiency and privacy. Focused on <S25BS005>

functionality, safety, and software quality, it aims to transform rentals into a more streamlined, cost-effective process, fostering trust and efficiency in the industry. The project considers various development requirements, assumptions, limitations, and dependencies to deliver a scalable, user-centric solution.

1223. POEM MASTER

Project Advisor	MS. RUBAB JAVAID
Status	Completed

Poem Master is an innovative web-based application that offers a comprehensive range of services for crafting joyful and happy poems in the English language. As an accessible online platform, it caters to users seeking to create personalized poems tailored to their specific preferences, including preferred nouns and adjectives etc. Notably, Poem Master operates as an open-source application, extending its benefits to individuals with diverse interests and requirements. Our user-friendly system welcomes a wide array of individuals, such as students, those unfamiliar with the art of poem writing, individuals without access to professional writers, those seeking affordable options, and those constrained by limited time. The task of generating the poems will be carried out by the modern technologies of NLP and Machine Learning. And, as result of these technologies a well versed and professional poem will be generated.

1224. AMAZON MAP VIOLATION REPORT SYSTEM

Project Advisor	MS. RUBAB JAVAID
Status	Completed

A MAP (Minimum Advertised Price) violation report system for Amazon Brand would be a tool that allows brand owners to monitor instances where resellers or third-party sellers are advertising brand's products at a price lower than the minimum advertised price set by the brand. This system would typically include the following features: Weekly Monitoring, Tracking and analysis, advanced search and filtering capabilities, Dashboard for brand's products listed on Amazon in one country.

1225. PLAN IT RIGHT

Project Advisor	MS. RUBAB JAVAID
Status	Completed

This project aims to create a website that connects catering service providers with customers, particularly in densely populated areas. It targets both individual customers and event planners, offering a variety of catering options for various events. The site will feature comprehensive details like prices, services, and reviews. Requiring skills in website development, database management, UI design, and online payment integration, the project focuses on a seamless user experience for exploring and booking catering services. It aims to increase accessibility to diverse catering options, improve user satisfaction, and establish an efficient service provider-customer ecosystem, revolutionizing the catering service industry.

F23-CS

1226. MISSION INDEPENDENCE

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

Immerse yourself in an expansive and captivating free-world game where possibilities are boundless. Embark on a thrilling adventure set in a vast open-world environment, teeming with breathtaking landscapes, bustling cities, and untamed wilderness. With an immersive blend of exploration, strategic decision-making, and exhilarating gameplay, this game with a great story that needs your problem solving skill to reach the destiny. The game provides the controls which will be based on new input system using unity.

1227. AI-POET

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

The "AI-Poet" project introduces an innovative web application designed to revolutionize the interaction with Iqbal's poetry. This project addresses the challenge of comprehending and composing poetry in Iqbal's style by proposing an AI-powered Chatbot. The primary objective is to enable users to input partial lines of Iqbal's poetry and receive complete poems in return, while also facilitating voice assistant integration and catering to users' moods and sentiments.

This initiative distinguishes itself by providing multilingual support in English, Urdu, and Persian, accommodating the diverse linguistic scope of Iqbal's works. The Chatbot not only generates poetry but also allows customization of styles, themes, and emotional expressions according to user preferences. To ensure authenticity, collaboration with Iqbal scholars will validate the accuracy of the generated poetry.

The proposed methodology involves data collection and preprocessing, employing advanced NLP models like GPT-3 or BERT for training, and integrating voice assistant functionalities. Additionally, sentiment analysis will be utilized to align the generated poems with the user's emotional state.

The AI-Poet project aims to continuously evolve by incorporating user interactions into its learning process, thereby enhancing its performance over time. Furthermore, a social sharing feature will enable users to disseminate the generated poems across popular social media platforms.

This initiative strives to create a sophisticated and user-centric platform that fosters a deeper appreciation for Iqbal's literary legacy. By leveraging cutting-edge AI technologies, linguistic diversity, user customization, and collaboration with scholars, the AI-Poet project aims to redefine the way poetry enthusiasts engage with Iqbal's profound verses.

1228. DRONE LIGHT SHOW SOFTWARE

Project Advisor	DR. ADNAN GHAFOOR
Status	Complete

This Software Requirements Specification (SRS) document outlines the necessary features, functionalities, and constraints for the development and execution of a cutting-edge project focused on orchestrating a drone light show using swarm robotics technology. The aim of this project is to create a visually stunning and synchronized aerial performance leveraging the capabilities of multiple drones operating collaboratively as a swarm.

The system will incorporate functionalities to import choreographed designs created in a 3D environment, allowing users to visualize and simulate the drone's flight paths and actions. Comprehensive testing within this simulation environment will enable users to refine and perfect the choreography before generating the final executable code.

Key features include the ability to import 3D choreographies, simulate drone flights, validate choreographed designs, and generate efficient and reliable executable code for the DJI Tello drone. The SRS will define the system's functional and non-functional requirements, outlining user

interactions, system behavior, performance parameters, security considerations, and any constraints that will govern the development and deployment of the software.

Through this SRS, the project aims to establish a comprehensive understanding of the software system's scope, functionalities, and technical specifications necessary for the successful development, testing, and deployment of the code generation platform for the DJI Tello drone, ensuring an intuitive, efficient, and reliable interface between choreographed designs and actual drone flight executions.

1229. EDUVENTURE ZONE - RECONFIGURABLE EDUCATION PLATFORM

Project Advisor	DR. DAVID SAMUEL BHATTI
Status	Complete

"EduVenture Zone" is a pioneering smart-learning platform crafted specifically for children aged 4 to 6, spanning pre-nursery to first-grade in Pakistan. This innovative solution addresses the prominent disparity between resource-rich and underprivileged schools by integrating cutting-edge features tailored for these young learners. At its core, the platform boasts AI-driven adaptive learning, enabling each student's educational journey to be as individualized as their fingerprint.

Additionally, "EduVenture Zone" harnesses the power of Speech Recognition and Correction, a dynamic speech-to-text feature ensuring that students pronounce words correctly. Whenever a mispronunciation occurs, the system promptly offers visual feedback, facilitating immediate correction. This real-time interaction fosters language-related confidence and accuracy in these young minds. Complementing this is the Visual and Alphabetical Recognition module, where students engage in activities that bridge visual cues with language-related symbols. They match images with the correct letters and colors, bolstering both their visual comprehension and language skills. To further enhance their motor and cognitive abilities, Interactive Tracing Exercises are embedded. Here, children trace letters or shapes, receiving feedback on their accuracy. A misstep prompts them to try again, guaranteeing mastery and reinforcing the learning process.

Beyond these the platform capitalizes on modern teaching techniques by providing interactive schoolbooks. With the added capability of unlocking enriched content through barcode and students receive a comprehensive learning experience. The AI-enhanced progress insights further enable educators to gauge and guide students effectively.

1230. SENTINELSECURE: VULNERABILITY ASSESSMENT AND RECOMMENDATION SYSTEM

Project Advisor	DR. DAVID SAMUEL BHATTI
Status	Complete

A cutting-edge cybersecurity system called SentinelSecure will be created to fortify digital defenses against persistent cyber threats. A unique vulnerability assessment tool with cutting-edge recommendation system for accuracy thorough coverage across networks, web applications, and computer systems will be introduced in this project. Prioritizing and resolving vulnerabilities are made easier by the user-friendly interface, contextual risk score, actionable reporting and recommendation system of this tool. Improvements in cybersecurity posture, faster response times, and better coordination between security teams are all anticipated results. Assuring a more secure digital future, SentinelSecure is likely to become a crucial tool in the fight against cyber attackers.

1231. PROVALUDEXCHANGE: AI-POWERED PROPERTY EVALUATION AND MARKETPLACE PLATFORM

Project Advisor	DR. DAVID SAMUEL BHATTI
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Status	Complete
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Typically when real estate is being abused by agent's, buyers and sellers are not well informed about the current market rates. We want to make it easier for real estate buyers and sellers to get real value for their properties. A full solution can be created by utilizing AI approaches like Automated Valuation Mod curacy, and insightful data, which will eventually optimize decision-making. AI uses automated valuation models (AVMs) to quickly and accurately value properties without the need for manual evaluations by examining market trends, property attributes, and historical sales data. We will use at least 2000 to 10000 property data to accurately calculate the property values. We need a huge amount of data for our application to work properly.

1232. DECISION SUPPORT SYSTEM FOR LOAN APPROVAL

Project Advisor	DR. DAVID SAMUEL BHATTI
Status	Complete

The existence of numerous online loan platforms and applications offers individuals a convenient avenue to secure loans. However, a critical issue arises as these platforms exhibit remarkably low success rates in terms of loan repayments. Bloomberg's projections for 2023 suggest a global loan default rate ranging from 5% to 8% in first-world nations, particularly affecting corporate loans. This concern becomes more pronounced on online lending platforms in underdeveloped nations, where the default rate escalates to a substantial 35% to 40%. The gravity of this situation is underscored by the fact that the entire loan process, including applications, approvals, and disbursements, is conducted online.

The online environment, while fostering accessibility, also introduces vulnerabilities. Dishonest borrowers exploit the digital landscape, leveraging the lack of face-to-face interactions to conceal or falsify information with the intent of fraudulently obtaining loans. This nefarious activity is facilitated by the remote and automated nature of the lending process, making it challenging for lenders to detect fraudulent behavior effectively. The absence of direct contact further complicates the verification process, leaving lenders at a disadvantage in identifying and preventing fraudulent loan applications. Moreover, the legal landscape exacerbates the issue. Lenders lack robust legal obligations regarding borrowers' loan performance, further contributing to the prevalence of defaults. This absence of stringent legal frameworks allows dishonest borrowers to escape accountability for their actions, perpetuating a cycle of frequent loan defaults that adversely affect the financial health of these online lending platforms. In essence, the confluence of online operations, inadequate fraud detection mechanisms, and a lack of stringent legal obligations creates a serious challenge in the realm of online lending. Addressing this issue necessitates a comprehensive reevaluation of the online lending model to incorporate more robust fraud prevention measures and legal frameworks that can mitigate the risks associated with loan defaults and uphold the integrity of the lending process.

1233. CRYPTORUN: UNITY P3E INFINITE JOURNEY WITH BLOCKCHAIN NFT CHARACTERS

Project Advisor	DR. GHULAM MUSTAFA
Status	Complete

In this cutting-edge proposal, we embark on a journey into the world of block-chain and crypto-currency to revolutionize the gaming industry. Inspired by the micro-transactions prevalent in blockbuster games [1] like Subway Surfer and Temple Run, our project seeks to introduce a paradigm shift with the implementation of an NFT marketplace. This groundbreaking marketplace will empower

players to acquire skins and collectibles, fostering a dynamic in-game economy where trading among players becomes the norm. Join us on this journey where gaming, block-chain, and innovation collide to redefine the gaming experience.

1234. PIXEL 3DIFY

Project Advisor	DR. GHULAM MUSTAFA
Status	Complete

In this Project we will build a mobile application that will solve the problem of dress recommendation using skin tones. Users will be able to get their 3d model according to their skin tones and through our recommendation system we will recommend the clothes based on the skin tones. This will all be done using a LIDAR sensor. The fit, style, size of the digital avatar will help us to recommend the dresses based on the compatibility and aesthetic of the clothing items.

1235. VIZAVATAR: VISUALIZE HEALTH WITH VIRTUAL AVATAR

Project Advisor	DR. GHULAM MUSTAFA
Status	Complete

This project, "VIZAVATAR: Visualize Health with Virtual Avatar," addresses the significant challenge of engaging individuals in active health monitoring. Our innovative solution introduces a digital twin, a customizable 2D avatar, to represent users' health data visually. This virtual representation changes dynamically in response to real-time health metrics obtained from wearable technology. The project's significance lies in enhancing user engagement with their health data, which is traditionally challenging due to the passive nature of existing health apps. We integrate mobile application development, user interface design, and artificial intelligence to develop an interactive platform. The avatar's appearance reflects the user's health condition, offering an engaging and proactive approach to health monitoring. The project outcomes include a user-friendly mobile application displaying the health avatar, an intuitive interface for viewing detailed health statistics, and an effective visual cue system for health alerts. The project aims to revolutionize personal health monitoring by fostering a more interactive and engaging user experience.

1236. SECUREVISION: REAL-TIME INCIDENT RESPONSE

Project Advisor	DR. IMRAN ARSHAD CH.
Status	Complete

The "SecureVision: Real-Time Incident Response" project aims to develop an innovative web-based system that addresses the critical issues of real-time detection and verification of two major social concerns: cigarette smoking and physical altercations. Leveraging cutting-edge computer vision and machine learning techniques, this project introduces a solution that actively monitors live video feeds to identify instances of these incidents. Furthermore, the system performs individual recognition and verification, facilitating immediate intervention or reporting when needed.

The significance of this project lies in its contribution to public safety. Cigarette smoking and physical altercations have far-reaching consequences for the well-being of individuals and communities, making their swift detection and response essential. By applying knowledge from computer science disciplines such as computer vision, machine learning, and software engineering, this project addresses the problem with practical technology.

The expected results include a web-based system that can accurately detect these incidents in real time, verify the individuals involved, and generate timely alerts to relevant authorities. The system will also

incorporate robust security and data privacy measures to ensure ethical use. The project represents an integration of knowledge areas from computer science and makes a significant impact on public safety.

1237. SMARTSTOCK: AUTOMATED INVENTORY OPTIMIZATION AND ANALYSIS SYSTEM

Project Advisor	DR. IMRAN ARSHAD CH.
Status	Complete

When we go to restaurants, we see managers have taken control of all the responsibilities from ordering stock, to entering it into the system and informing the owner about it. But this manual task brings a lot of theft and food leakage problems that need to be solved. Moreover, meeting the vendor physically is a time-consuming task and sometimes is very difficult in situations such as epidemics or pandemics. To do that, our new and advanced inventory management system based on cutting-edge technologies will provide a fast and reliable system that will handle and maintain the stocks and will inform the owner about the shortage of items and how much is needed to order.

The order, only if the owner accepts the request, will be generated to vendors that will be received to vendors on their online application. This will save the owner from losses and fraudulent activities and will maximize the efficiency of the mode of communication between the owner and vendor. The items that are sold the most will be displayed differently from other items and thus their ingredients will be ordered more. The system will also keep a record of the sales of items at national events to generate orders of stocks accordingly and to find the best and most costeffective packed products, the online grocery stores will be searched by using our advanced AI mechanisms and provide us with reliable items. Vendors for unpacked foods such as meat and vegetables will be fixed.

1238. SUGARSAGE - AI COMPANION FOR DIABETICS

Project Advisor	DR. IMRAN ARSHAD CH.
Status	Complete

This project introduces SugarSage, an AI-based mobile application specifically designed to address the complex dietary management needs of diabetic patients in Pakistan. The significance of this problem is emphasized by Pakistan's high diabetes prevalence, with a staggering 31% of the population affected. SugarSage aims to fill the gap in available resources for diabetic individuals by offering personalized dietary recommendations that consider individual food preferences, sugar levels, energy requirements, and locally available food options.

The application leverages machine learning techniques to analyze various factors influencing dietary choices and suggests optimal diet plans. Additionally, it enables users to record insulin intake, track walking and sleeping patterns, and maintain a calorie count, thus providing a comprehensive solution for diabetes management. The project's scope includes not only dietary recommendations but also the development of a user-friendly interface and functionalities that allow for effective monitoring of diabetes-related activities.

The outcomes of this project are expected to empower diabetic patients in Pakistan to take control of their diabetes management process, thereby improving their overall well-being and quality of life. The project also aims to provide valuable insights into the application of machine learning algorithms in a real-life healthcare scenario, along with experience in mobile application development and backend management.

1239. ZERO TRUST CYBER BOT (ZTCB)

Project Advisor	DR. MUHAMMAD UMAIR
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Status	Complete
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Background Problem:

Currently, AI-powered chatbot solutions like Babylon Health, ChatGPT, Aivo, and Mitsuku have proven versatile, serving purposes such as virtual healthcare assistance, advanced language interactions, and efficient customer support. These chatbots were created to make life more convenient and reduce the amount of human work. So, the question stands there that, can a chatbot be used for ethically taking user's consent and data on network and can a chatbot be used for monitoring network activities like malware and phishing?

Proposed Methodology:

When a user connects to an end device like a router, a webpage automatically pops up on the screen, initiating an interaction with a chatbot. The chatbot promptly requests the users to enter their details, and if the user is not already registered, it guides them through the registration process. Once the registration is completed, an OTP is generated and sent to the user's provided phone number. After successfully verifying the OTP, the chatbot presents the network consent and policy, seeking for user's agreement. Upon the user's agreement, ZTCB grants access to the network and simultaneously creates a log file in the backend. After that ZTCB system shifts into monitoring mode, where it continuously validates the user's activities. If any malicious intent is detected, the ZTCB promptly blocks the user from the network, ensuring the network's security and integrity.

Expected Results:

The implementation of ZTCB is expected to yield several positive outcomes. First, the use of advanced machine learning and AI technologies will enable ZTCB to efficiently detect and intercept malware and phishing, reducing the risk of cyber threats for users. By promptly alerting users to potential threats, ZTCB will enhance the overall security of their digital landscape. Second, seamless mobile verification (OTP) for user authentication will establish a transparent and secure environment, reducing the risk of unauthorized access to the network. Third, the real-time monitoring and analysis capabilities of ZTCB will enable proactive malware and phishing detection, preventing potential breaches before they occur. Overall, the expected results of implementing ZTCB include improved network security, proactive threat detection, transparent user authentication, and reduced human effort.

1240. ARTIFICIAL INTELLIGENCE-BASED SUPPORT AND RESISTANCE INDICATOR

Project Advisor	DR. RABIA TEHSEEN
Status	Complete

The project deals with making decisions in the money's market using an artificially intelligent web-based solution. The tool is focused on price actions in the finance sectors giving intelligent views to its users. Automated interpretation of such financial charts like candlestick patterns, chart patterns, trends and support/resistance levels are its main purpose. The intention is to provide direction on the trading and give an estimated chance of its success. This project highlights a combination of artificial intelligence. This is aimed at democratizing trading, which will provide easier trading tools that do not rely on intensive markets knowledge.

1241. RECOMMENDATION SYSTEM FOR FYP IDEAS

Project Advisor	DR. RABIA TEHSEEN
Status	Complete

Our system will tackle the urgent problems and empower students in their FYP initiatives. This system seeks to speed up the process of finding FYP ideas by utilizing sophisticated machine learning algorithms and taking into account user preferences. It also wants to give students curated recommendations for new projects. This project will be carefully developed to offer students a user-centric and intelligent platform that makes the process of choosing pertinent and interesting Final Year Project (FYP) ideas easier.

1242. AUTISM THERAPEUTIC CHAT-BOT: EMPOWERING HEARTS AND MINDS

Project Advisor	DR. RABIA TEHSEEN
Status	Complete

The "Autism Therapeutic Chat-bot: Empowering Hearts and Minds" project addresses two key challenges in Autism Spectrum Disorder (ASD): limited physical movement and behavioral health. This initiative introduces an innovative chat-bot solution, powered by machine learning algorithms, to deliver customized activity recommendations. The chat-bot accurately identifies symptoms and evolves over time, providing dynamic support. Designed for accessibility, it serves guardians, ASD specialists, therapists, and educators. The project aims to alleviate daily struggles for ASD families and contribute to a broader societal understanding and acceptance of neurodiversity. By celebrating unique cognitive styles and perspectives, this initiative strives to empower hearts and minds, making a significant impact on the well-being of children with ASD and their families.

1243. TRACCHAIN

Project Advisor	DR. RABIA TEHSEEN
Status	Complete

"TRACCHAIN" is a final year project that revolutionizes supply chain management with blockchain technology. It enhances transparency, traceability, and security by creating an immutable record of transactions, reducing fraud, and improving efficiency. Integrating smart contracts automates processes and ensures compliance. With real-time tracking and visibility, TRACCHAIN empowers businesses with accurate data, fostering trust and efficiency. The project involves blockchain development, smart contracts, database management, and web application development.

1244. DETECTING AI-GENERATED VOICES: DEEPFAKE DETECTION APP USING DEEP LEARNING TECHNIQUE

Project Advisor	DR. RABIA TEHSEEN
Status	Complete

This project focuses on detecting AI-generated voices using deep learning techniques. With the rise of AI voice generation, distinguishing genuine from artificial voices is crucial for security and audio content trustworthiness. We employed convolutional neural networks (CNNs) to analyze and classify audio samples. The dataset included both human and AI-generated voice recordings. Our results show that the deep learning model can differentiate between authentic and AI-generated voices with a 90% accuracy rate. This advancement is significant in ensuring the reliability of voices in the AI era and preventing issues caused by fake voices. Future improvements aim to enhance the app's efficiency and achieve maximum accuracy.

1245. PFOLD AI - PROTEIN FOLDING USING DEEP LEARNING

Project Advisor	DR. SAEED IQBAL
Status	Complete

Protein folding is essential because the three-dimensional shape of a protein determines its functionality. When a protein is synthesized, it initially exists as a linear chain of amino acids. The folding process allows the protein to adopt its native conformation, where it can perform its specific biological functions. Incorrect folding can lead to loss of function or aggregation, potentially causing diseases such as Alzheimer's and Parkinson's. Proper protein folding ensures that proteins can carry out their intended roles in cellular processes.

1246. CHESTX GENERATIVE PRE-TRAINED TRANSFORMER (CHESTXGPT)

Project Advisor	DR. SAEED IQBAL
Status	Complete

Medical imaging using chest X-rays identifies numerous lung disorders and is reliable for detecting thoracic issues. Diagnosing these disorders can be time-consuming for radiologists, but an automated AI system can assist in quicker and more reliable detection. This research aims to help doctors make clinical decisions and provide early diagnosis of 14 diseases using a customized CNN model. ChestXGPT, an AI platform, addresses challenges in CXR analysis by leveraging the MIMIC CXR dataset to identify diseases like Atelectasis, Cardiomegaly, and Edema. Utilizing CNNs, Encoder-Decoder architectures, and LSTM techniques, it enhances disease detection and speeds up diagnostics. ChestXGPT's user-friendly web interface allows chest X-ray uploads and real-time analysis, benefiting healthcare professionals and the public by saving time and providing accessible disease information anytime, anywhere.

1247. POLYPNET

Project Advisor	DR. SAEED IQBAL
Status	Complete

PolypNet is an innovative system designed to enhance colorectal cancer diagnosis by addressing the limitations of traditional manual methods for polyp inspection during colonoscopy. Early and accurate detection of polyps is critical, as some, especially flat and sessile types, are difficult to distinguish visually and often lead to missed diagnoses. Acting as a valuable second observer, PolypNet complements physicians without altering the colonoscopy procedure. It streamlines information processing and optimizes data flow using deep learning to improve polyp detection. By handling diverse polyp textures, shapes, and colors, PolypNet aims to improve colorectal cancer diagnosis and ultimately enhance patient outcomes.

1248. VISUAL INSIGHT: ANTHROPOLOGY OF EXPLORATION OF EYE

Project Advisor	DR. SAEED IQBAL
Status	Complete

The World Health Organization (WHO) reports that two-thirds of global deaths are due to chronic diseases like diabetes, with Diabetic Retinopathy (DR) and Glaucoma being significant eye diseases. Visual Insight is a groundbreaking app that revolutionizes eye infection detection using advanced image recognition and machine learning. Users can upload or capture eye images, and the app provides visualizations and insights. Utilizing image processing and deep learning, a CNN model is trained with medical imaging datasets to detect diseases like Glaucoma, Diabetic Retinopathy, Fundus, and

Diabetic Macular Edema. The goal is to develop a Flutter app that accurately identifies these diseases, enhancing early detection and management, and improving eye health outcomes.

1249. DR. GPT

Project Advisor	DR. SAEED IQBAL
Status	Complete

Dr. GPT addresses the challenges of manual medical report generation by automating the process using deep learning techniques like CNNs and RNNs. This project aims to create an efficient and accurate system that generates medical reports from images, reducing human error and delays. By combining computer vision and natural language processing, Dr. GPT accelerates report generation and ensures precision. Key components include medical image preprocessing, deep learning model development, and a user-friendly web interface. The project tackles data quality and model optimization challenges, requiring expertise in deep learning, computer vision, NLP, and medical imaging. Dr. GPT enhances efficiency, improves patient care, and standardizes healthcare documentation, demonstrating deep learning's potential in healthcare.

1250. GESTURESOMKEGUARD: ENFORCING SMOKE FREE ZONES

Project Advisor	DR. SHAZIA SAQIB
Status	Complete

"GestureSmokeGuard: Enforcing Smoke-Free Zones" is an innovative project aimed at promoting healthier environments by preventing smoking in designated smoke-free areas. This system utilizes advanced gesture recognition and smoke detection technologies to identify and alert authorities of smoking incidents in real-time. By leveraging machine learning algorithms and computer vision techniques, GestureSmokeGuard accurately detects gestures associated with smoking and the presence of smoke particles. The project integrates a user-friendly web interface for monitoring and managing alerts, ensuring timely responses and maintaining the integrity of smoke-free zones. This comprehensive solution aims to enhance public health, enforce regulations effectively, and create a cleaner, safer environment for all.

1251. BLIND ASSIST

Project Advisor	MR. AOUN AFTAB
Status	Complete

Our project enhances safety and independence for visually impaired individuals by developing glasses with a camera powered by computer vision. This system detects obstacles in real-time, alerting the user via a phone app. Integrating obstacle detection with geo-fencing helps users avoid hazards and stay within a safe area set by family or friends. Utilizing GPS, computer vision, machine learning, and app development, the project offers a practical solution for obstacle detection and user-friendly alerts, advancing assistive technology for enhanced safety.

1252. AI-POWERED LEGAL COUNSELLOR

Project Advisor	MR. AOUN AFTAB
Status	Complete

"AI-Powered Legal Counsellor" is an innovative final year project aimed at revolutionizing the legal advisory landscape using artificial intelligence. This project leverages AI and natural language processing (NLP) to create an intelligent system capable of providing legal counsel. The primary objective is to offer accessible, accurate, and efficient legal advice to individuals and businesses, reducing the reliance on human legal experts for preliminary consultations. The system analyzes user queries, retrieves relevant legal information, and delivers tailored advice by interpreting laws and regulations. By incorporating machine learning algorithms and a comprehensive legal database, "AI-Powered Legal Counsellor" aims to enhance the accessibility and affordability of legal services, ultimately contributing to a more informed and empowered society.

1253. TRAVELWISE

Project Advisor	MR. AOUN AFTAB
Status	Complete

"TravelWise" is a comprehensive travel planning application designed to simplify and enhance the travel experience. The project addresses the common challenges travelers face, such as itinerary management, cost estimation, and local insights. Leveraging advanced algorithms and a user-friendly interface, TravelWise offers personalized travel itineraries, budget planning, and real-time updates. It integrates features like destination recommendations, accommodation booking, and transportation options. Additionally, TravelWise includes a community feature for sharing travel experiences and tips. The project combines knowledge in web development, mobile app development, machine learning, and database management to deliver a seamless and efficient travel planning tool, aimed at making travel easier, more organized, and enjoyable for users.

1254. LOCOPRO

Project Advisor	MR. AOUN AFTAB
Status	Complete

Our web application is a one-stop solution for all your real estate needs. You can browse through thousands of listings from verified sellers and buyers, compare prices and features, and contact the owners directly. You can also request a real-time onsite property inspection, where our agents will visit the property, inspect it and show you the complete details that will help you to make a clear decision. Our web application is easy to use, secure, and fast. You can access it from any device, anywhere, anytime. You can also save your favorite properties, share them with your friends and family, and get notified of any changes or updates. Whether you are buying or selling, our web application will help you find your dream home or sell your property at the best price. You can also estimate the cost of your gray structure and you can also book a live inspection appointment.

1255. NEARBUY

Project Advisor	MR. ASAD KAMAL
Status	Complete

NearBuy is an innovative online marketplace that revolutionizes shopping by integrating e-commerce with cutting-edge technologies. Utilizing artificial intelligence, NearBuy offers personalized recommendations and an AI Image Recognition Search System for effortless product discovery. Users can browse and purchase a wide range of products, while a dynamic Bidding System allows sellers to set terms and achieve optimal prices. Features like real-time inventory updates, geolocation services, and secure transaction processing enhance user satisfaction. NearBuy caters to both individual

consumers and businesses, staying ahead of industry trends with a secure, intuitive, and enjoyable user experience. Strategic partnerships and marketing initiatives boost brand visibility, ensuring NearBuy operates ethically and responsibly, redefining online commerce.

1256. RESCATANDO NEZUKO

Project Advisor	MR. ASIF FAROOQ
Status	Complete

We are presenting a game developed in Unreal Engine 5.3, inspired by Japanese anime. The storyline involves a boy fighting demons to protect his family, resulting in arena-style combat reminiscent of Tekken 7 but with anime characters. The game employs AI algorithms that learn player moves to increase difficulty. Features include high-level graphics, epic game interface, smooth animations, and special combat moves. The game has five stages, each with a unique enemy. Initially, the project includes these five stages, with plans to add more levels in future updates. Key elements include a dynamic environment, thrilling UI, special character moves, and realistic animations, all in 1080p HD resolution.

1257. DORM FINDER

Project Advisor	MR. ASIF FAROOQ
Status	Complete

Dorm Finder is a platform designed to make the process of finding affordable student accommodations near universities easier for both students and hostel owners. It offers web and mobile applications with features like accommodation listings, 360-degree views, booking capabilities, user authentication, and property management tools. The project draws on expertise in web and mobile development, software development, and database management systems. The expected results are a fully functional platform with a strong 360-degree view feature and improved transparency in the accommodation search process.

1258. REAL-TIME PREDICTIVE & DESCRIPTIVE ANALYSIS IN HEALTHCARE

Project Advisor	MR. ASIF FAROOQ
Status	Complete

The project aims to make a scalable and real-time healthcare analytics system. The system will utilize the generic data format based on patient demographics to predict the spread of viral disease. Later on, it could be expanded to utilize clinical data as well as environmental data to make the prediction more robust. To facilitate data analysis and visualization, we will create a role-based secure web portal for hospitals and medical centers to gather data and analyze. This web portal will be a powerful descriptive and predictive analytical dashboard through interactive graphs and models. The system will provide summaries, drill-down views, and data filtering to analyze disease trends. It will empower health authorities to make well-informed decisions and take proactive measures to safeguard public health effectively.

1259. SIMS (SOFTWARE INSPECTION MANAGEMENT SYSTEM)

Project Advisor	MR. ASIF FAROOQ
Status	Complete

The "Software Inspection Management System" (SIMS) is a web application designed to enhance the efficiency and effectiveness of software testing processes. SIMS automates test case generation for sign-up and login procedures, while allowing inspectors to manually create test cases for other software features. It is tailored to check software with 5 to 6 features, conducting tests based on these cases and generating comprehensive reports. Additionally, SIMS includes real-time communication capabilities, facilitating seamless interaction among inspectors. This system aims to streamline the testing process, ensuring thorough and efficient software inspections.

1260. ISTIFADA

Project Advisor	MR. ASIF FAROOQ
Status	Complete

Pakistan is facing a severe economic crisis with peak inflation, rising unemployment due to rapid population growth, and companies downsizing or closing operations. This decline in job opportunities forces households to cut expenses, often laying off domestic staff. Consequently, some individuals may resort to unethical means to earn a living. Additionally, tourists struggle to find necessary items for short-term stays. There is an urgent need to create employment opportunities to improve society during these hardships. Innovative solutions are required to address these challenges, support households, and provide legitimate ways for people to earn income, fostering economic stability and community well-being.

1261. RACE FOR RESCUE

Project Advisor	MR. ASIM RAZA
Status	Complete

In today's mobile gaming world, exciting stories and fun multiplayer experiences are rare. "Race for Rescue" aims to change this with a unique, immersive gaming experience. The game features a single-player story and thrilling races like cycling, horse riding, and boating, with AI opponents that adjust their difficulty. The integration of a gripping rescue mission storyline into the races adds depth and excitement. For competitive players, the multiplayer mode offers dynamic races with changing obstacles, ensuring each race feels fresh. By combining varied race types with an engaging narrative, "Race for Rescue" stands out in mobile gaming. Welcome to a new era where every race is an adventure and every moment offers a chance for rescue.

1262. TRIADIC SQL DB

Project Advisor	MR. ASIM RAZA
Status	Complete

This research project tackles imperfect information in database management by developing a Peircean Triadic SQL database system. Leveraging logical and mathematical frameworks and a new programming toolkit, it aims to create a structured database solution based on Charles Peirce's Triadic Logic, offering an alternative to classical binary and fuzzy logic. The project involves creating a front-end with a graphical interface and a back-end with file handling, database schema, query modules, and network security. Challenges include the unique Triadic SQL nature, low-level file handling, performance optimization, and compatibility with existing databases. Required knowledge areas include data structures, low-level programming, security, database management, and network design.

Expected outcomes include a desktop application with broad applications in computer science, marking a pioneering effort in Peircean Triadic database management systems.

1263. ENHANCING LEGAL INFORMATION ACCESSIBILITY

Project Advisor	MR. ASIM RAZA
Status	Complete

"Enhancing Legal Information Accessibility" is a final year project aimed at improving the accessibility and understanding of legal information for the general public. This project leverages natural language processing (NLP) and machine learning to develop a user-friendly platform that simplifies complex legal texts. By converting legal jargon into plain language, the platform makes legal documents more comprehensible. Key features include a searchable database of legal documents, an AI-powered chatbot for instant legal queries, and personalized recommendations based on user needs. The project integrates web development, AI, and legal studies, providing a comprehensive tool to bridge the gap between legal professionals and the public, promoting greater legal literacy and accessibility.

1264. BLADES OF FURY

Project Advisor	MR. ASIM RAZA
Status	Complete

"Blades of Fury" is an immersive 3D action-adventure game developed as a final year project for the BSCS program. The game transports players into a richly detailed fantasy world where they assume the role of a skilled warrior on a quest to save their realm from an impending evil. Leveraging advanced game development techniques, the project integrates sophisticated AI for enemy behaviors, realistic physics for combat dynamics, and stunning visual effects using the Unreal Engine. "Blades of Fury" focuses on delivering an engaging storyline, challenging gameplay, and visually captivating environments. The project involves comprehensive knowledge areas, including game design, 3D modeling, AI programming, and user interface design, aiming to create a captivating and immersive gaming experience.

1265. PLANTEO

Project Advisor	MR. AATHER SULEMAN
Status	Complete

"PLANTEO" is an innovative project designed to revolutionize the way we monitor and care for plants using advanced technology. The project leverages IoT sensors, machine learning, and a user-friendly mobile application to provide real-time monitoring and analysis of plant health. By collecting data on soil moisture, temperature, light, and humidity, PLANTEO offers personalized care recommendations and alerts to ensure optimal plant growth. The system uses machine learning algorithms to predict and diagnose potential plant health issues, offering proactive solutions. This project integrates expertise in IoT, data science, and mobile app development to create a comprehensive plant care solution, promoting sustainable gardening and agriculture practices.

1266. MEHFOOZ AASHIYANA

Project Advisor	MR. DANIYAL AHMED
Status	Complete

The "Mehfooz Aashiyana" project addresses domestic violence, child abuse, and harassment by developing a mobile app and website to connect victims with NGOs in Pakistan for immediate support. NGOs will verify their government licenses before registering. The app features a chat board for victim inquiries and an "Anonymous" registration option to protect privacy. It offers "Legal Advice" and "Psychiatric Advice" tabs, providing free consultations with lawyers and psychiatrists through Chatbot and partnering NGOs. The project uses data analysis to identify high-reporting areas, or "red zones," helping NGOs allocate resources efficiently. "Mehfooz Aashiyana" aims to revolutionize support for abuse victims in Pakistan, empowering them and fostering a society dedicated to preventing abuse.

1267. CINSAGE (MOVIE RECOMMENDATION SYSTEM)

Project Advisor	MR. DANIYAL AHMED
Status	Complete

Traditional movie recommendation systems often overlook users' emotional needs when selecting films. Our system addresses this gap by integrating emotion detection alongside user preferences, viewing history, and input. Using advanced machine learning algorithms, it tailors movie recommendations to evoke specific emotional responses such as inspiration, laughter, suspense, or introspection. This ensures users receive personalized suggestions aligned with their desired emotional experiences. By prioritizing the interplay between content and emotions, our system transcends traditional recommendation models, providing a more holistic and gratifying cinematic journey. As a result, our platform is poised to redefine personalized movie recommendations, offering a new dimension that resonates with the diverse emotional palette of audiences.

1268. INNOVATIVE MERCHANTISING PLUGIN WITH AI CHATBOT & REACT.JS

Project Advisor	MR. DANIYAL AHMED
Status	Complete

This project bridges e-commerce, AI, and web development by integrating WordPress and ReactJS. It addresses the lack of personalized and engaging shopping experiences on traditional e-commerce sites. By incorporating advanced AI chatbots and recommendation systems, our solution offers interactive and personalized recommendations based on user preferences. It also emphasizes fraud prevention through GPS location verification and photo capture. Administrators benefit from a user-friendly interface and data synchronization with the "Agile Store Locator" plugin. Expected results include enhanced user engagement, increased customer loyalty, and a competitive edge for e-commerce businesses. This project redefines e-commerce by combining AI-driven personalization and robust security measures for a more immersive and efficient online shopping experience.

1269. AUTISM SPECTRUM DISORDER (ASD)

Project Advisor	MR. DANIYAL AHMED
Status	Complete

Autism Spectrum Disorder (ASD) presents challenges in early diagnosis, impacting timely interventions. This project leverages machine learning to enhance diagnostic accuracy and efficiency. Conventional methods, reliant on subjective evaluations, lack standardization, leading to delayed diagnoses. The project aims to address this by developing a robust machine-learning model and analyzing diverse datasets for early ASD detection.

1270. RISHTA.COM

Project Advisor	MR. DANIYAL AHMED
Status	Complete

This project aims to create a secure online platform for individuals seeking life partners, addressing privacy and security concerns in digital matchmaking. Challenges include lack of trust, identity verification, impersonation, and privacy breaches. Our solution provides a trustworthy platform with facial recognition for identity verification, ensuring profiles are only active once verified. To protect user credentials, we will implement no-screenshot and no-video recording features. Additionally, an accurate matchmaking algorithm will facilitate meaningful connections, ensuring a secure and intuitive matrimonial web and mobile application.

1271. VETNER360

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Complete

Vetner360 is a comprehensive pet care application where users can create a pet profile, schedule diet and activities, and monitor health through an image recognition system. The AI prompts weekly health checks, helping users find and schedule appointments with high-rated doctors. After medical checkups, both the doctor and pet owner can rate each other, enhancing transparency. Users can also buy, sell, and adopt pets by posting ads, with features to check pet ratings and consult the pet's doctor through chat. Each post includes the pet's profile image, name, rating, and doctor profile, while the pet's profile history contains the doctor's prescription, activity goals, and diet plans.

1272. VIRTUAL NUTRITION FEED EXPERT

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Complete

The Virtual Nutrition Feed Expert (VNFE) project simplifies animal feed formulation for poultry, fish, and cows using a web application and AI chatbot. It replaces traditional, complex Excel models with an intuitive tool that calculates cost-effective feeds, ingredient combinations, and optimal farming conditions. This user-friendly solution eliminates the need for dedicated nutritionists, leveraging machine learning and software engineering to provide personalized feed recommendations. VNFE aims to enhance feed quality and cost-effectiveness in animal production through accessible technology.

1273. AI CONTENTSCRIPTER: INTELLIGENT MOBILE APP FOR AUTOMATED CONTENT GENERATION AND TREND ANALYSIS

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Complete

The "AI ContentScripter" mobile application revolutionizes digital content creation by leveraging AI and natural language processing (NLP). Developed using Flutter for Android, it offers an intuitive platform for effortless content generation, real-time trend analysis, and personalized recommendations. Addressing challenges like labor-intensive content creation and trend alignment, "AI ContentScripter" enables users to produce high-quality content, such as video scripts, blog posts, and social media updates. Key features include simplified script writing, real-time trend analysis, and tailored

recommendations. The project focuses on seamless integration of content creation with trend analysis, a user-friendly interface, and continuous AI improvement, aiming to enhance productivity, foster creativity, and ensure data privacy and security.

1274. SMARTFIN: FINANCE TRACKER

Project Advisor	MR. ENGR. SAJID SALEEM
Status	Complete

SmartFin is an innovative cross-platform app that tackles the challenge of efficient personal financial management. Traditional tools often lack personalization, and manual record-keeping is tedious. SmartFin leverages AI and allows users to attach invoices, receipts, or screenshots for transaction record-keeping. It includes features like streamlined expense tracking, personalized budgeting, and user profiling for tailored recommendations. SmartFin integrates with Pakistani shopping apps for real-time notifications and exclusive deals, supports exporting financial data in PDF/CSV format, and manages loans with reminders. It uses OCR for easy document organization and imports SMS transaction data for added convenience. With advanced budgeting and personalized recommendations, SmartFin promotes financial literacy and responsible money management.

1275. HALF MARK

Project Advisor	MR. FARAZ ALI
Status	Complete

Our project, "Half Mark," aims to enhance fingerprint recognition by making it smarter and more accurate. Crime scene fingerprints often consist of only 20% of the fingertip and are frequently smudged, whereas current systems require a complete and accurate fingerprint image for identification. To address this issue, we are developing a system based on a deep learning model that can accurately identify individuals using partial fingerprints. This project will significantly contribute to national security and government services, offering a more secure and efficient solution for individuals and organizations.

1276. VISUAL LAB

Project Advisor	MR. FARAZ ALI
Status	Complete

Visual Lab aims to develop a comprehensive web-based learning platform dedicated to Data Structures and Algorithms (DSA). In response to the fragmented and often challenging landscape of DSA education, this platform offers an integrated solution for learners of all levels. It combines theoretical explanations, algorithm visualizations, code samples in various languages, user profiles, progress tracking, a chatbot for assistance, a text editor, collaborative coding capabilities, and a structured learning roadmap. The result is an accessible and interactive resource that empowers users to master DSA through an engaging and user-friendly interface.

1277. NORTH ESCAPE: YOUR SMART TRAVEL GUIDE

Project Advisor	MR. FARRUKH EHSAN
Status	Complete

"North Escape: Your Smart Travel Guide" is a cutting-edge mobile application designed to revolutionize travel experiences in northern regions. This project leverages advanced technologies such as artificial intelligence and geolocation services to provide users with personalized travel recommendations, real-time navigation, and comprehensive information on local attractions. The app includes features like weather updates, safety alerts, accommodation booking, and an interactive map highlighting points of interest. By integrating user reviews and travel logs, "North Escape" ensures a community-driven platform that enhances trip planning and execution. This project aims to simplify travel, making it more efficient and enjoyable, ultimately fostering greater exploration and adventure in northern destinations.

1278. INTERVIEW BOT BUDDY

Project Advisor	MR. IHTISHAM-UL-HAQ
Status	Complete

"Interview Bot Buddy" is an innovative solution transforming job interview preparation through AI and NLP. It addresses the challenges job seekers face by offering personalized guidance, individualized tips, and an engaging animated avatar named "Buddy." This project levels the playing field for job seekers by providing accessible, tailored resources to improve interview skills and job prospects. Utilizing knowledge from NLP, Web Development, Database Management, Software Engineering, Algorithm Development, AI, and UX Design, the project aims to create a user-friendly web application. Expected outcomes include advanced proficiency in these areas and a comprehensive, interactive interview preparation tool that enhances overall employability.

1279. CARCARE PRO: YOUR ULTIMATE CAR MAINTENANCE COMPANION

Project Advisor	MR. IRFAN ANJUM
Status	Complete

CarCare Pro is an innovative mobile application designed to revolutionize car ownership by providing a comprehensive platform for managing and maintaining vehicles. It addresses common challenges such as maintaining accurate service histories, selecting workshops, and proactively addressing maintenance needs. The app also offers a secure method for sharing service history during vehicle sales. Developed for Android using Flutter, CarCare Pro leverages machine learning algorithms to predict necessary services based on the vehicle's make, model, and mileage. Users can create car profiles, maintain service history, and control access to that history. Workshops can list their services, prices, and ratings, with the app recommending nearby workshops using location services. The expected outcome is a streamlined maintenance and service history management process, reducing costs, increasing safety, and improving workshop visibility. CarCare Pro aims to transform the automotive industry, enhancing the experience for both car owners and service providers.

1280. QUICKBOOK: SIMPLIFIED, SPEEDY EVENT RESERVATIONS

Project Advisor	MR. IRFAN ANJUM
Status	Complete

QuickBook is a groundbreaking web platform designed to address inefficiencies in traditional event planning through a holistic, AI-driven solution. Focusing on efficiency, personalization, and security, it aims to set new standards in personalized event solutions. Key knowledge areas for QuickBook include software development, web development, artificial intelligence, cybersecurity, database management, and event management. The platform leverages AI and innovative technologies to meet

contemporary demands for seamless event planning. Outcomes include a sophisticated web application with AI-powered features that enhance ticket sales, guest list management, and vendor coordination. Continuous learning and feedback-driven improvements ensure QuickBook's adaptability in the evolving event planning landscape, offering a cutting-edge solution for modern event management.

1281. AUTONOMOUS MARINE ROBOT (SUBMARINE)

Project Advisor	MR. IRFAN ANJUM
Status	Complete

The Autonomous Marine Robot (AMR) project aims to address the critical issue of open water drowning incidents by deploying an autonomous submarine. The AMR, equipped with advanced sensors and obstacle avoidance mechanisms, autonomously detects distressed individuals underwater and sends their coordinates to a mobile application. The project focuses on merging technology, efficient navigation, and swift response to enhance global water safety.

1282. THE INTELLISTAY

Project Advisor	MR. IRFAN ANJUM
Status	Complete

Intellistay is an innovative hostel management system for the Android platform, developed using Flutter (Dart). It addresses inefficiencies in manual hostel management by integrating OpenCV for facial recognition, Firebase for data management, and payment gateway APIs for seamless billing. The app centralizes attendance tracking, bed allocation, menu updates, and bill payments, enhancing efficiency and convenience for hostel residents and managers. By automating these processes, Intellistay ensures accurate attendance, optimized bed allocation, and secure transactions. This project leverages Flutter, OpenCV, Firebase, and payment gateways to create a user-friendly interface, significantly improving hostel operations and redefining the hostel management experience.

1283. THE AURAGUID: VISUAL ASSISTIVE AI SYSTEM FOR THE BLIND

Project Advisor	MR. IRFAN ANJUM
Status	Complete

This project develops an assistive device for visually impaired individuals using USB cameras, LIDAR sensors, and vibratory motors. It provides real-time spatial information and feedback through stereo headphones. The device utilizes one camera for OCR, face recognition, and object detection, while dual cameras offer environmental audio feedback. LIDAR sensors measure distances to obstacles, providing haptic feedback to prevent collisions. Software components include OpenCV, TesseractOCR, TensorFlow, and YOLOv8, compatible with Debian-based OS, specifically Ubuntu on Nvidia Jetson Nano. The aim is to enhance mobility and independence with advanced computer vision and haptic feedback technologies.

1284. BIDBAY

Project Advisor	MR. JAWAD HASSAN
Status	Complete

Traditional business price negotiation processes face challenges such as inefficiency, lack of personalization, limited adaptability, and customer dissatisfaction. Manual negotiations are resource-intensive and complex, especially with a growing customer base. This project addresses these issues,

highlighting the inefficiency, inability to tackle real-time market dynamics, human biases, and scaling challenges. The proposed solution utilizes AI-powered systems to streamline negotiation processes, making them more efficient, personalized, and adaptable. AI uses real-time market data and trends to help businesses make informed pricing decisions, adjusting prices based on market conditions and competitor pricing. AI-driven systems also reduce human biases, ensuring fair and consistent pricing. This enhances efficiency, improves customer satisfaction, and provides a competitive edge in a dynamic marketplace.

1285. CONNECTUCP: EMPOWERING STUDENT SOCIETIES FOR SUCCESS

Project Advisor	MR. JAWAD HASSAN
Status	Complete

"Connect UCP" is a web-based portal aimed at improving student experiences at the University of Central Punjab (UCP) by automating society management, event organization, scholarship applications, and communication. This project targets inefficiencies in the Department of Student Affairs (DSA) with features like society elections, financial management, and centralized data storage, enhancing administrative efficiency, transparency, and accessibility. Initially developed for UCP, "Connect UCP" could potentially be adapted for commercial use by other universities, marking a significant advancement in university management systems.

1286. MOOD MELODY

Project Advisor	MR. JAWAD HASSAN
Status	Complete

We are developing a multiuser mobile application called "Mood Melody" that enhances traditional music streaming by incorporating real-time emotional awareness. This unique app works with wearables to track users' heart rates and facial expressions using advanced mood recognition algorithms. By adapting music playlists to the user's current emotional state, Mood Melody aims to significantly improve user experiences. The initiative acknowledges the crucial role emotions play in musical preferences, filling a major gap in traditional music streaming applications. This innovation offers a personalized and emotionally attuned music experience, revolutionizing how users interact with their music.

1287. VEHICLE-GPT

Project Advisor	MR. JAWAD HASSAN
Status	Complete

Our project, "Vehicle GPT," addresses issues found in current car-related apps. These apps lack conversational interfaces, struggle with image sharing, and don't assist in finding nearby mechanics or car parts. Vehicle GPT aims to solve these problems by introducing a chat feature that mimics human conversation, enabling users to share pictures for better assistance, and helping them locate local mechanics and shops for car parts. Our goal is to simplify car-related information access and provide users with the necessary help more efficiently, making car maintenance and repairs more convenient for everyone.

1288. SOOTHIFY (EMOTIONS BASED LIGHT AND MUSIC THARAPY)

Project Advisor	MR. JAWAD HASSAN
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Status	Complete
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This proposal outlines a web application focused on Face Emotion Detection, consisting of four phases: face detection, feature extraction, emotion classification, and color/music allocation. The system analyzes facial expressions from live camera feeds or images using trained machine learning models for accurate recognition. The app aims to create a calming environment by adjusting surrounding colors and music based on detected emotions, serving as a therapeutic tool to enhance users' emotional well-being through personalized sensory adjustments.

1289. RAZAKAAR: REVOLUTIONIZING VOLUNTEER PROGRAMS

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

Razakaar is a transformative platform enhancing the Volunteers In Service (VIS) program at universities by connecting volunteers with those in need in key areas: food, blood, medicine, and environmental initiatives. Through a user-friendly app, Razakaar facilitates surplus food and medication collection and distribution, organizes blood donations, and supports environmental projects like tree plantation. It promotes transparency, accountability, and community engagement via mobile technology to optimize resource allocation. Razakaar aims to foster social responsibility, combat food wastage, improve healthcare access, and promote environmental sustainability, making the VIS program more impactful and inclusive within university communities.

1290. QUANTUM INFUSED LLM-BASED KNOWLEDGE RETRIEVAL

Project Advisor	MR. KAMRAN SHABBIR
Status	Complete

This research project is dedicated to enhancing user interaction with Large Language Models. In the context of domain-specific knowledge, LLMs often fall short of meeting user expectations. The primary issues encompass users' difficulties articulating precise and topic-wise information needs and the limitations of LLM-generated responses concerning general topics. To address these challenges, we explore Quantum Machine Learning techniques to diversify LLM outputs, focusing on domain-specific knowledge using information retrieval techniques. To achieve our objective, we are reducing the gap between LLMs and manual searches. This multidisciplinary project integrates expertise from Generative AI (LLMs), Quantum Machine Learning, Deep Learning, Natural Language Processing, Information Retrieval, and Web Development to redefine user experiences with LLMs.

1291. CROP-CURE

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

This project utilizes machine learning to enhance crop management, prevent diseases, and aid rice type identification using TensorFlow and Keras. AI models predict rice breeds and crop diseases (rice, wheat, sugarcane, corn) through leaf image analysis, offering farmers advice on prevention and solutions. A mobile app and web portal simplify use for farmers and buyers, enabling instant rice type identification from grain pictures. The project aims to empower stakeholders with timely information, boosting crop yield, sustainable practices, and consumer satisfaction.

1292. AI ENHANCED WEBGUARD: INTELLIGENT IP BLACKLISTING FOR ENHANCED SECURITY

Project Advisor	DR. GHULAM MUSTAFA
Status	Complete

The project "AI-Enhanced WebGuard: Intelligent IP Blacklisting for Enhanced Security" aims to develop a web security system using AI and machine learning to protect against cyber threats like malware, DDoS attacks, SQL injections, and man-in-the-middle attacks. As cybersecurity threats grow more sophisticated, traditional WebGuard and firewall technologies struggle to keep up. This system will use AI algorithms to analyze real-time web traffic and accurately identify malicious IP addresses. By implementing dynamic IP blacklisting, it will block suspicious IPs in real-time, enhancing security and preventing unauthorized access. The project includes a literature review, data collection, and preprocessing for AI model training. The system will focus on real-time threat detection, behavioral IP analysis, and automatic IP blacklisting, demonstrating its effectiveness in various practical use cases.

1293. WHISPERING SHADOWS: VEILED HORRORS

Project Advisor	MR. M. AMMAR HASSAN
Status	Complete

Our project is a game development project based on Unity software. Genre of the game is Puzzle Adventure which is a very popular genre in game industry. Puzzle Adventure games have a good track record of success, and their lack of availability on mobile platforms presents a potential. By developing a high-quality, user-friendly game, this project aims to capitalize on the demand for such games, contributing to the diversity of mobile gaming options. Knowledge areas required Unity specialization, Blender 3D designing, logical coding for mechanics and GUI (graphical user interface) for main menu and user interaction. Our end project will be fully fledged user-friendly mobile application game.

1294. UCP COMMUNITY

Project Advisor	MR. M. AMMAR HASSAN
Status	Complete

Our project is a multifaceted social networking platform designed to enhance Students connections and experiences only for UCP students. With three core modules – Profile, Social, and Events – it offers a comprehensive ecosystem for social interaction and event management. UCP community leverages AI to create a safer and more engaging environment, ensuring that users can connect, share, and participate with confidence.

1295. BRICKS REAL

Project Advisor	MR. M. AMMAR HASSAN
Status	Complete

Bricks Real transforms house hunting through Virtual Reality (VR) tours, addressing the costly and time-consuming process of visiting multiple properties, exacerbated by COVID-19. This project meets the growing demand for convenient, cost-effective, and safe house hunting solutions. Bricks Real leverages expertise in VR, 3D Modeling, UI Design, Real Estate, and Technology Integration, using software like Blender. It offers significant cost and time savings, an immersive user experience, and enhanced accessibility. By providing a contactless solution in line with health trends, Bricks Real

revolutionizes the real estate experience, making property exploration efficient, engaging, and accessible to a wider audience.

1296. FITTOGETHER

Project Advisor	MR. M. AMMAR HASSAN
Status	Complete

"FitTogether" is a comprehensive fitness application designed to foster community and motivation among users pursuing their fitness goals. The project leverages advanced technologies such as AI and machine learning to provide personalized workout plans, track progress, and suggest nutritional advice based on individual health data. FitTogether also integrates social networking features, allowing users to connect, share achievements, and participate in group challenges, fostering a supportive and engaging environment. The project encompasses web and mobile development, data analytics, and user experience design to create an intuitive platform. FitTogether aims to revolutionize fitness routines by combining personalized training, social interaction, and real-time progress tracking, ultimately promoting healthier lifestyles and community well-being.

1297. STITCH CONNECT

Project Advisor	MR. M. AMMAR HASSAN
Status	Complete

"Stitch Connect" revolutionizes access to tailoring services and local vendors via a user-friendly web app. It bridges the gap between users seeking tailors and vendors offering specialized clothing, simplifying connections and featuring a marketplace for locally crafted garments. Users can find tailors, schedule appointments, and explore a vibrant marketplace. The project boosts local businesses by improving visibility and business prospects, integrating geolocation, e-commerce, and intuitive design for an engaging and efficient user experience.

1298. DATE-SHEETER

Project Advisor	MR. M. SHEHARYAR LIAQAT
Status	Complete

The "Date-Sheeter" project is aimed at implementing Robotic Process Automation (RPA) to streamline and automate the laborious and time-consuming date sheet generation process within the Examination Department at the University of Central Punjab (UCP). This project is set to significantly reduce the time and resources required for date sheet generation, ensure accuracy, and enhance efficiency.

1299. AI-POWERED ADAPTIVE E-LEARNING PLATFORM WITH ADVISOR RECOMMENDER

Project Advisor	MR. M. UMAIR MUNIR CH.
Status	Complete

In today's diverse educational landscape, adapting traditional teaching methods to cater to unique learning styles can be challenging. Traditional education's one-size-fits-all approach often fails to meet the varied needs of students. To address this, we are developing an innovative Learning Web Application that uses AI and Machine Learning to identify each student's optimal learning style. This project aims to revolutionize learning by integrating insights from AI, machine learning, and educational psychology. Students benefit from personalized learning experiences through adaptive tests and tailored content recommendations, while an advanced advisor system enhances teacher-student interactions. This intelligent web application will propose engaging lessons and assessments

tailored to each student's needs, improving overall satisfaction and ease of learning. Anticipated outcomes include improved learning achievements, heightened teacher satisfaction, and increased student engagement. This research highlights the importance of using technology to personalize education and overcome traditional educational system limitations.

1300. CHINGCHI RICKSHAW SIMULATOR

Project Advisor	MR. M. UMAR HAMEED
Status	Complete

The Chingchi Rickshaw Simulator project is a Unity 3D-based game designed to offer players an engaging and instructive experience. With three distinct modes - Pick and Drop, Parking, and Multiplayer Racing - the game immerses players in the role of a Chingchi Rickshaw driver navigating various Pakistani cities. The project's core objectives include introducing cultural diversity, providing realistic driving mechanics, and offering competitive multiplayer racing. Developed in C# within the Unity 3D framework, the game emphasizes city design, passenger management, and dynamic, educational gameplay. The anticipated outcome is a well-rounded and immersive gaming experience that appeals to a broad audience, from simulation enthusiasts to competitive players.

1301. INDOOR SPORTS BOOKING (BOOKING GENIE)

Project Advisor	MR. M. UMAR HAMEED
Status	Complete

"Booking Genie" tackles challenges in Pakistan's indoor sports industry by centralizing facility bookings. The project addresses complex procedures, team formation issues, and the absence of organized tournaments. Utilizing mobile app development, database management, and UX design, the aim is to enhance accessibility and foster a vibrant sports culture. Knowledge areas encompass app development, database management, UX design, payment processing, and tournament organization. The anticipated outcomes include a user-friendly platform, streamlined booking processes, improved team formation, and organized tournaments, contributing to a thriving sports community.

1302. REVENGE OF ZOMBIE

Project Advisor	MR. M. UMAR HAMEED
Status	Complete

"Revenge of Zombie" is an immersive 3D game that tells the story of a junior scientist turned unexpected hero after a sinister experiment goes wrong. This experiment, intended to bestow supernatural abilities, transforms him into a powerful zombie with retained memories. Abandoned in the mountains, he resurrects and discovers his newfound powers. Haunted by his condition, he embarks on a quest for vengeance, controlling other zombies and battling those responsible for his transformation. He aims to find an antidote to free the infected and restore humanity. In this captivating world, players navigate blurred lines of morality as the zombie scientist seeks retribution and redemption.

1303. ENHANCING UNI WORKSPACE SECURITY THROUGH ANOMALY DETECTION

Project Advisor	MR. M. UMAR HAMEED
Status	Complete

This project enhances university security by implementing real-time anomaly detection in live CCTV footage. The objective is to create a web platform that streams live CCTV footage to a cloud-based database, where advanced AI models analyze it for anomalies. AI algorithms scrutinize the footage to identify and categorize suspicious activities. Upon detecting any abnormal behavior, the system triggers immediate alerts to authorized users for swift responses. Key components include a user-friendly web interface, secure cloud-based data storage and processing, and cutting-edge AI models for real-time anomaly detection. This system aims to improve proactive surveillance, making university security more efficient and responsive, thereby fostering a safer academic environment.

1304. TALKBRIEF: A SPEECH SUMMARIZER TOOL

Project Advisor	MR. M. UMAR HAMEED
Status	Complete

This project aims to streamline time-consuming lectures and speeches by creating a Python-based web application. It utilizes Automatic Speech Recognition (ASR) for audio/video to text transcription, cleans and tokenizes the text, extracts keywords and key phrases using TF-IDF scores, and employs TextRank and LexRank algorithms for text summarization. The application features a user-friendly web interface and undergoes rigorous testing for accuracy, ultimately delivering concise summaries of lengthy content to users. This tool enhances efficiency by transforming long lectures and speeches into manageable, summarized text, making information more accessible and easier to comprehend.

1305. NAVROUTE

Project Advisor	MR. M. USMAN AFZAL
Status	Complete

"NavRoute" addresses urban mobility challenges by integrating ridesharing applications with local public transportation systems to combat rising fuel costs and traffic congestion. This project combines mobile app development, geographic information systems, and logistical coordination to create a user-friendly interface. Users can input their location and destination, and NavRoute determines the most cost-effective and time-efficient route, blending rideshare options with buses and trains. The project aims to revolutionize commuting by providing a sustainable, affordable, and convenient alternative to personal vehicle usage. Anticipated outcomes include a functional mobile app, seamless ridesharing API integration, and enhanced access to local transport networks, contributing to a more efficient urban mobility landscape.

1306. INTRUSIONX

Project Advisor	MR. M. ZULKIFL HASAN
Status	Complete

The IntrusionX project aims to develop an integrated Network IDS/SIEM tool by combining Suricata, a high-performance open-source Network IDS, and Wazuh. This project focuses on precise integration of Suricata and Wazuh for effective intrusion detection and event management, comprising 20% of the effort. Additionally, an installation script will be developed to simplify configuration, also accounting for 20% of the project. The main focus is creating a custom front-end for an intuitive user interface. Over 20% of the project hours are dedicated to comprehensive documentation, including technical details, user guides, and project insights. Successfully executing this project will enhance network security and elevate cybersecurity standards.

1307. CIPHERFALL: THE DIGITAL REVOLUTION BEGINS

Project Advisor	MR. M. ZULKIFL HASAN
Status	Complete

In this project, we propose "Cipherfall: Digital Revolution Starts," a game that merges entertainment with cybersecurity education. Players will navigate a virtual world filled with hidden puzzles and encrypted codes as a nerdy hero. By solving these challenges, they will uncover the truth behind a digital revolution. The game incorporates real-world cybersecurity concepts, including encryption, network security, social engineering, and ethical hacking, providing realistic scenarios for players to solve. Developed using the Unity game engine, "Cipherfall" aims to balance fun and learning, ensuring players not only enjoy the experience but also gain a deeper understanding of cybersecurity.

1308. INTEGRATING MATLAB, RAPIDMINER, AND RATEL FOR ML-BASED INVESTIGATION, DETECTION AND PREVENTION OF CYBERSECURITY ATTACKS USING HONEYPOTS

Project Advisor	MR. M. ZULKIFL HASAN
Status	Complete

This research aims to enhance early intrusion detection systems by addressing Honeypot Vulnerabilities, Data Privacy Concerns, and Generalizability issues in a controlled environment. Eight machine learning algorithms are evaluated to improve accuracy in detecting and preventing cyberattacks. The study aims to identify the most effective algorithm to develop a robust intrusion detection system, mitigating vulnerabilities and ensuring adaptability across various industries. This holistic approach marks a significant advancement in strengthening cybersecurity frameworks.

1309. PRIVY

Project Advisor	MR. M. ZULKIFL HASAN
Status	Complete

Privy is an innovative communication platform focused on user privacy and data security. It uses advanced encryption algorithms to ensure that messages and calls are inaccessible to unauthorized users. Privy offers Encrypted Cloud Storage, providing a secure place for sensitive files, media, and documents. Local data is encrypted on devices before uploading, with access restricted to authorized individuals. Additional features include Message Scheduling for timely reminders and Document Scan, allowing users to scan and send documents via chat. The Live Text feature automatically extracts text from images, making information sharing seamless. Privy enhances efficiency and security in communication, making it an ideal choice for safeguarding sensitive data.

1310. ASSESSING KNEE OSTEOARTHRITIS PROGRESSION VIA X-RAY IMAGE ANALYSIS

Project Advisor	MR. M. ZULKIFL HASAN
Status	Complete

Osteoarthritis is the most common type of arthritis, with knee osteoarthritis being particularly prevalent. All forms of arthritis are chronic, progressive diseases. Radiographs display joint space narrowing, osteophyte formation, sclerosis, and bone deformities, making x-ray the gold standard for diagnosis. The Kellgren and Lawrence (KL) grading system rates x-ray images based on osteoarthritis

severity. Early detection of knee osteoarthritis is crucial for effective treatment. However, existing methods often rely on summing or subtracting suspicious grades to increase accuracy. This study aims to automatically investigate and grade knee osteoarthritis from radiographs using deep learning for early diagnosis. The dataset comprises knee X-ray images from the Osteoarthritis Initiative, focusing on a single posteroanterior standing x-ray image.

1311. VIDRAR: VIDEO TRANSCRIPT SUMMARIZATION ACTIVITY RECOGNITION

Project Advisor	MR. MOHSIN ABBAS
Status	Complete

Developing a system that combines video transcript summarization with activity recognition is required for understanding of the content within a particular YouTube video. Our system intends to process the transcribing spoken content, resulting in concise textual summaries while also identifying and categorizing activities captured in the video. This approach has the potential to change how we engage with video data, offering a good understanding that seamlessly blends textual and visual information. The potential applications of this system are abundant. It can elevate educational platforms through automated content organization, fortify security systems with activity identification, and optimize content retrieval by delivering concise, informative summaries.

1312. AUTOMATED AVA (AMAZON VIRTUAL ASSISTANT)

Project Advisor	MR. MOHSIN SAMI
Status	Complete

"Automated AVA (Amazon Virtual Assistant)" is a final year project aimed at creating a seamless and efficient virtual assistant tailored for Amazon users. The project focuses on developing an intelligent assistant capable of streamlining the shopping experience by automating tasks such as order tracking, price comparison, and personalized recommendations. By integrating advanced natural language processing and machine learning techniques, AVA can understand and respond to user queries effectively, providing a user-friendly interface for managing shopping lists, tracking deliveries, and receiving alerts on deals and discounts. The project aims to enhance the user experience by offering a convenient and interactive way to engage with Amazon's services, ultimately improving customer satisfaction and efficiency in online shopping.

1313. PHARMACY MEDICATION TRACKER

Project Advisor	MR. MUHAMMAD ARHAM TARIQ
Status	Complete

The "Pharmacy Medication Tracker" project revolutionizes medication procurement by developing a web application that integrates real-time data from local desktop-based pharmacy applications. By installing scripts in various pharmacies, the system enables clients to easily search for medications, offers alternative options via a generic formula when needed, and provides information about nearby pharmacies. Additionally, this innovative solution allows users to buy medicines online, providing a seamless option for home delivery. Users can submit prescription images online as proof for critical medicines, enhancing accessibility and eliminating the need for physical pharmacy visits. The project ambitiously aims to bridge the existing gap between patients and essential healthcare resources, ushering in a new era of streamlined medication procurement and improved healthcare accessibility for individuals across diverse demographics.

1314. GRAPHOTRAIT: STUDENTS PERSONALITY THROUGH GRAPHOLOGY

Project Advisor	MR. MUHAMMAD ARHAM TARIQ
Status	Complete

This project aims to enhance educational outcomes by predicting student personality traits using graphology, which studies handwriting to infer traits. Automation via machine learning and image processing will improve prediction efficiency and reliability. The study will also explore correlations between predicted traits and academic performance. Successful outcomes could lead to customized educational approaches that improve academic performance and student welfare.

1315. FAKE JOB IDENTIFIER

Project Advisor	MR. MUHAMMAD ARHAM TARIQ
Status	Complete

The "Fake Job Identifier" initiative tackles fake job postings in the Pakistani online job market using precise web scraping to gather a detailed dataset. Employing advanced machine learning, the project aims to build a robust model distinguishing genuine from fake job listings. Key focuses include web scraping, machine learning, and app development to create a user-friendly web application for job authenticity verification. Anticipated outcomes include a highly accurate machine learning model and a specific dataset for Pakistan's job market, enhancing job seekers' online experience by empowering them to verify postings effectively.

1316. POULTRY VISION: ADVANCED IMAGE PROCESSING FOR FANCY CHICKEN BREED IDENTIFICATION IN PAKISTAN

Project Advisor	MR. MUHAMMAD ARHAM TARIQ
Status	Complete

The poultry industry in Pakistan faces significant challenges in disease detection, impacting both economic stability and public health. Traditional methods lack a preventive approach, leading to delayed responses. This project proposes an innovative solution utilizing advanced image processing and Convolutional Neural Networks (CNNs) to predict chicken diseases through fecal matter analysis. By analyzing images of fecal matter, the system can identify early signs of disease, enabling prompt and effective intervention. This approach aims to enhance the health management of poultry, reduce economic losses, and improve overall industry stability.

1317. AUTOMATED BUSINESS ANALYST AND PROJECT EXCAVATOR

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	Complete

Looking for people to work for you, or clients for whom you can work is a hectic process. One must search for companies or people and then keep on contacting them for work in various ways possible till a point where this process becomes frantic and dry as dust. Or on freelancing platforms, one must reach out to others one by one. It takes a lot of time and effort to find your desired work and then reach out to them. Therefore, we aim to provide a platform to people where they can find and reach out to others through an automated project excavator tool. We look forward to developing this platform as an autonomous and automated project locator.

1318. LIE DETECTOR USING FACIAL ANALYSIS AND PHYSIOLOGICAL SIGNALS

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	Complete

Our project addresses the need for a reliable truth verification tool in interviews and interrogations by utilizing facial analysis and physiological signal processing to distinguish between truthful and deceptive responses. Building on existing research in lie detection and emotion recognition, we use OpenCV, MediaPipe's Face Mesh, and FER for facial analysis, alongside physiological signals like blink rate. These signals are compared to an individual's baseline behavior to create a practical deception detection solution. The expected outcome is a user-friendly computer application that enhances lie detection accuracy, supporting professionals in making more informed decisions across various domains.

1319. EVENTLINKUP

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	Complete

The community-driven event planning app aims to enhance communication and collaboration among residents in cities of all sizes. It addresses the challenge of coordinating local events efficiently in today's fast-paced world, where many residents may be unaware of local happenings. This app bridges neighborhood isolation in larger cities, facilitating cross-city collaboration for unique district events. By providing a common platform, it streamlines event planning and resource sharing, fostering stronger community engagement through effective communication and collaboration.

1320. JOURNEYCRAFT: TAILOR-MADE EXPLORATIONS, SUSTAINABLE ADVENTURES, AND COMMUNAL WANDERLUST

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	Complete

In Pakistan's scenic backwaters like Naran and Balakot, tourists often struggle with language barriers that hinder their ability to connect with locals and fully appreciate the beauty of these places. Existing translation solutions fail with regional languages, compounding the issue. JourneyCraft proposes a real-time voice-to-text translation app powered by Natural Language Processing (NLP). This HCI-driven mobile app aims to facilitate cultural immersion and improve the travel experience by bridging language gaps effectively. With expertise from tourism and hospitality sectors, JourneyCraft seeks to build meaningful connections between travelers and local communities, enhancing mutual understanding and appreciation.

1321. FIRE DETECTION, ANTI-THEFT & HEALTH CARE SECURITY SYSTEM

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	Complete

This project integrates fire detection, theft prevention, and healthcare monitoring into a cohesive security solution for residential and commercial settings. By combining these functionalities, it enhances security management efficiency and emergency response times. Real-time data exchange

facilitates swift responses, surpassing traditional systems. Methodology includes requirement analysis, sensor integration, algorithm development, data processing, user interface design, and robust data management, ensuring reliability through extensive testing. Expected outcomes include early fire detection, effective theft prevention, and remote healthcare monitoring, promoting a safer, more secure environment.

1322. CAR DERBY BATTLE MOBILE GAME

Project Advisor	MR. MUSTAFA HASSAN
Status	Complete

Our Game “Car Derby Battle Game” is a multiplayer game on mobile, which provide Better graphics and more Intractable User Interface, Car Derby Battle Game Provides Multiple Mobile Controls which can be Change anytime in the game. Car Derby Battle Game also provides three of the Best gaming modes available in a multiplayer car game. Tank Battle, Battle Arena and Knockout Race. Car Derby Battle Game also provide the option to Create Custom Room so you can play with Friends and User can also play on server with other players. Car Derby Battle Game has realistic car physics, Enhanced environment graphics, and option to update your purchased or updated Vehicles.

1323. BLOCK-CHAIN BASED LAND RECORD MANAGEMENT SYSTEM

Project Advisor	MR. MUSTAFA HASSAN
Status	Complete

The project introduces a Blockchain-Based Land Record Management System for Pakistan to enhance data accuracy, automate processes, and ensure secure property transactions using blockchain and smart contracts. The 20-week plan includes milestones, communication strategies, and risk management. Deliverables include a web app, documentation, and a project report to improve governance and foster trust in property transactions.

1324. LAHOREBOT

Project Advisor	MR. MUSTAFA HASSAN
Status	Complete

LahoreBot is a chatbot dedicated to delivering vital information about Lahore city. It provides daily prices for products like fruits, vegetables, chicken, and petrol, recommending the best places to purchase them. Additionally, LahoreBot offers future price predictions, daily weather forecasts, and updates on current news. This comprehensive tool aims to empower residents and visitors by keeping them informed with real-time information, facilitating informed decision-making about city life in Lahore.

1325. AI-POWERED E-COMMERCE ITEM RECOGNITION

Project Advisor	MR. NUMAN ASLAM
Status	Complete

AI-Powered E-Commerce Item Recognition is a final year BSCS project aimed at revolutionizing online shopping experiences through advanced artificial intelligence. The project focuses on developing an intelligent system capable of accurately recognizing and categorizing e-commerce items from images. By leveraging AI, the system can automate the identification of products, enhancing the efficiency and accuracy of item listings. This solution addresses key challenges in e-commerce, such as manual data entry errors and time-consuming product categorization. The project encompasses key

areas like machine learning, computer vision, and data analysis to build a robust and user-friendly platform. The anticipated outcome is a streamlined, automated item recognition system that significantly improves the e-commerce shopping experience for both sellers and buyers.

1326. PRINTVERSE

Project Advisor	MR. SAJID HUSSAIN
Status	Complete

PRINTVERSE addresses challenges in 3D printing by introducing a revolutionary AI-driven 3D printer. This project simplifies the 3D modeling process, allowing users to create designs through a user-friendly text-based interface. Traditional 3D printing requires expertise and intricate tools, making it time-consuming and costly. PRINTVERSE democratizes 3D printing, making it accessible to enthusiasts, hobbyists, and professionals. By harnessing AI, users can create intricate 3D models from simple text inputs, streamlining the design process. Key areas include AI, microcontroller programming, web development, and logic design. The project aims to develop a comprehensive platform integrating 3D modeling, CAD file handling, and hardware control, making 3D printing versatile and user-friendly, fostering creativity and innovation.

1327. MULTI-MODAL AUDIO-VISUAL DEEPFAKE DETECTION

Project Advisor	MR. SHEIKH WAQAS AKHTAR
Status	Complete

This project aims to develop a novel multi-modal detector for audio-visual deepfakes, addressing concerns about the misuse of deep fake technology. While existing methods focus on detecting either video or audio deepfakes separately, this project proposes a unified approach capable of detecting deepfakes across both modalities. By integrating advancements in deepfake detection algorithms, the goal is to create an effective detector capable of identifying sophisticated audio-visual manipulations. The project will culminate in the implementation of this detector within a mobile app, showcasing its efficacy in real-world scenarios and contributing to advancements in deepfake detection research.

1328. AUTOMATED EXAMINER: AN AI QUESTION GENERATION AND ANSWER MARKING SYSTEM

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	Complete

This project aims to develop an automated system using natural language processing (NLP) techniques and machine learning algorithms to generate questions and mark answers. The current manual process in education is time-consuming and error-prone. By automating these tasks, we aim to enhance the efficiency and accuracy of the education system. The system will employ NLP techniques like tokenization, stemming, and part-of-speech tagging, along with machine learning algorithms to generate short and long answer questions. Benefits include time and effort savings for teachers, accurate student assessments, and improved efficiency in educational institutions. A thorough literature review will inform the project, and wireframes and prototypes will be developed for visualization. A dedicated team of three students will carry out the project to ensure successful development and implementation.

1329. DRIVER'S ATTENTION EVALUATOR: A MACHINE LEARNING BASED SYSTEM TO DETECT DRIVER FATIGUE AND GAZE

Project Advisor	MR. SHEIKH WAQAS AKHTAR
Status	Complete

Road traffic accidents remain a significant global issue, with driver negligence like fatigue and distraction leading causes of fatalities. Our project aims to enhance road safety by developing an advanced system that accurately detects driver gaze and fatigue. Emphasizing algorithmic efficiency and customization to minimize false alarms, the system includes a user-friendly mobile app. This app provides drivers with insights into their habits, promoting focused driving and reducing distractions. Ultimately, our goal is to enhance road safety, save lives, and mitigate the societal impact of accidents through innovative technology.

1330. MULTIMODEL 3D BRAIN TUMOR SEGMENTATION USING DEEP LEARNING

Project Advisor	MR. SHEIKH WAQAS AKHTAR
Status	Complete

This project focuses on leveraging multimodal 3D imaging data to develop an efficient and accurate deep learning-based segmentation model for brain tumors. By integrating medical imaging, deep learning, and computer vision, the study aims to achieve comprehensive tumor segmentation across MRI, CT scans, and other modalities. The objective is to enhance clinical decision-making with precise and robust tumor delineation. The project utilizes diverse datasets to understand tumor characteristics holistically. Expected outcomes include novel algorithms that accurately delineate tumor boundaries, improving treatment planning and patient care. This work aims to advance brain tumor segmentation, significantly impacting the diagnosis and treatment of neurological conditions.

1331. GAME-BASED STUDENT PERFORMANCE PREDICTION

Project Advisor	MR. SHEIKH WAQAS AKHTAR
Status	Complete

Our final year project, "Game-Based Student Performance Prediction," combines gaming and advanced analytics to predict computer science student success using machine learning. The core objective is to create a game-based learning environment that collects data through gameplay to predict student performance. This addresses the critical issue of identifying struggling students early and providing tailored support to improve their outcomes. The project's significance lies in enhancing educational results by offering personalized assistance, increasing engagement and retention through gamification. By drawing expertise from Computer Science, Machine Learning, Game Development, and Educational Psychology, we aim to deliver a predictive model within a gamified framework, ultimately revolutionizing educational practices with data-driven student support.

1332. AI-POWERED FITNESS COMPANION

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

The project aims to develop a mobile application harnessing artificial intelligence to assist individuals in achieving their fitness objectives. This comprehensive app comprises three core modules: Human

Pose Estimation, Food Portion Estimation, and an AI-driven Chatbot. The Human Pose Estimation module employs AI to track users' body movements, providing real-time feedback on exercise form and progress. The Food Portion Estimation module utilizes AI to accurately estimate food sizes, helping users monitor calorie intake and establish healthier dietary habits. The Chatbot, trained on an extensive dataset, offers comprehensive insights into fitness and nutrition. The anticipated results include a functional, accurate, and intuitive app that enhances users' fitness journeys.

1333. PETSCAN: YOUR INTERACTIVE PET COMPANION

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

"PetScan: Your Interactive Pet Companion" enhances pet ownership and animal care through innovative technology. This mobile application uses image processing and machine learning to provide instant species identification and comprehensive pet information. The project promotes responsible pet ownership, discourages unethical animal trading, and improves animal well-being. By leveraging image processing, machine learning, and mobile app development, PetScan offers accurate species identification, a responsible animal marketplace, real-time health assessments, and tailored nutrition guidance. PetScan aims to revolutionize pet care, fostering a deeper connection between people and the animal kingdom while ensuring pets receive the best possible care.

1334. TRUESEC (TRUCKING SURVEILLANCE SYSTEM)

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

This project aims to create a comprehensive solution for monitoring trucks carrying sensitive consignments over long distances in remote areas. The system integrates technologies for real-time visibility and enhanced security. Trucks are equipped with GPS tracking for location monitoring and Raspberry Pi 4 devices to collect and transmit data like speed, driver's facial expression, and geolocation. IoT sensors monitor environmental factors such as temperature, humidity, and light exposure to ensure proper cargo handling. Surveillance cameras inside the trucks provide live feeds to the control center for visual monitoring and immediate action if needed. A reliable network infrastructure ensures uninterrupted data transmission using cellular and radio communication. The control center processes data with machine learning algorithms to detect anomalies and potential risks, triggering timely alerts and interventions.

1335. AUTOMATED FIRE EXTINGUISHER

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

This project aims to develop a sensor-free fire and smoke detection system utilizing camera-based technology. Addressing the limitations of traditional sensor-dependent approaches, this endeavor leverages computer vision and machine learning techniques to discern fire and smoke patterns from camera imagery. The significance lies in providing an accessible and cost-effective alternative for fire detection in environments where sensor deployment may be impractical. By amalgamating knowledge areas such as computer vision, machine learning, and image processing, the project strives to create a functional prototype capable of real-time detection and alerting, contributing to enhanced safety measures in various settings and potentially augmenting existing infrastructure with reliable fire and smoke detection capabilities.

1336. DUBMASTERAI: AI-DRIVEN MULTILINGUAL VIDEO DUBBING

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

Our project aims to develop a web-based video dubbing system powered by artificial intelligence (AI) to address the need for seamless and efficient dubbing of videos into multiple languages. The system comprises four main modules: audio extraction from video, audio-to-text conversion, text translation, text-to-speech synthesis with matching voices, and lip synchronization. The significance of this project lies in its potential to revolutionize video content localization, making it accessible to a global audience. Language barriers often hinder the reach and impact of videos. Our system bridges this gap by enabling users to easily dub their content into various languages, broadening their audience reach.

1337. VIRTUAL REALITY SURGERY SIMULATION FOR ORTHOPEDIC SURGEONS: ENHANCING MEDICAL TRAINING AND SURGICAL SKILLS

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

The Virtual Reality Surgery Simulation for Orthopedic Surgeons project addresses the inadequacies of traditional surgical training, which rely on theoretical knowledge and limited practical exposure. This issue affects the confidence and competence of aspiring orthopedic surgeons and patient safety. Our project leverages virtual reality, 3D modeling, haptic technology, machine learning, and orthopedic surgery to create a realistic operating room environment with high-fidelity 3D models of human leg anatomy and orthopedic instruments. Interactive hand controllers with haptic feedback enable trainees to perform surgical procedures in a lifelike digital realm. Various surgical scenarios cater to different skill levels, and machine learning provides personalized feedback. The project aims to provide a safe, controlled platform for hands-on experience, reduce medical errors, and improve patient safety, ultimately setting a precedent for VR simulations in medical education.

1338. LIBRABOT: YOUR INTELLIGENT LIBRARY ASSISTANT

Project Advisor	MR. SYED TANWEER SHAH BUKHARI
Status	Complete

The project aims to transform the library experience with a chatbot featuring a robot librarian avatar. In today's evolving educational landscape, libraries are redefining their roles as hubs of knowledge and innovation. Our initiative focuses on developing an interactive platform using a Large Language Model (LLM) to assist students effectively. By addressing challenges like low student attendance and the absence of a research guidance system, the chatbot aims to revolutionize access to library resources. This innovative approach enhances user engagement, encourages higher attendance, and modernizes the library environment through advanced technologies.

1339. ADMIBOT: AI ADMISSION ASSISTANT

Project Advisor	MR. SYED TANWEER SHAH BUKHARI
Status	Complete

"AdmiBot" revolutionizes university admissions with an advanced chatbot empowered by large language models (LLMs) and a human-like avatar. It aims to provide comprehensive guidance and personalized support to prospective students, helping them navigate the admissions process

confidently. By leveraging tailored LLMs and extensive degree data, AdmiBot bridges information gaps, simplifies complex procedures, and ensures informed decision-making. Our vision is for AdmiBot to serve as a guiding partner, facilitating students' academic aspirations and transforming the admissions experience into a seamless, efficient, and user-friendly journey.

1340. ACTION REPLICO

Project Advisor	MR. UMER ARSHAD
Status	Complete

"Action Replico" bridges the gap between human actions in videos and their dynamic replication onto 3D models using Next.js, Flask/Django, and AI-based action extraction. The project focuses on accurately extracting and mapping intricate human actions from video datasets onto user-uploaded 3D models in real-time. Leveraging TensorFlow/PyTorch-based models for action recognition ensures precision. Situated at the convergence of computer vision, machine learning, web development, and 3D modeling, "Action Replico" employs Next.js for a seamless user experience and Flask/Django for secure backend operations. This innovative platform not only delivers an interactive user interface but also lays the groundwork for future advancements in action replication onto 3D models.

1341. VENUE RENTAL APPLICATION

Project Advisor	MR. UMER ARSHAD
Status	Complete

The Venue Rental application is a final year project aimed at creating an efficient, hassle-free platform for connecting venue owners with customers. It features a user-friendly interface for browsing a wide range of venues, complete with detailed descriptions and high-quality images. A built-in chat feature allows real-time communication between customers and venue owners. The app also facilitates secure in-app booking and payments. Designed for events like weddings, corporate gatherings, and birthday parties, it helps venue owners rent out idle spaces and customers find unique venues. This project simplifies the venue booking process, making it more efficient and convenient for all users.

1342. FARM ANIMAL DISEASE OUTBREAK PREDICTION ALLY

Project Advisor	MR. USMAN AAMER
Status	Complete

The Animal Disease Outbreak Ally (ADOA) is a revolutionary framework designed to combat the rapid spread of infectious diseases in animal populations. Recent outbreaks have significantly impacted biodiversity, food security, and public health. ADOA offers a multifaceted approach to early detection, rapid response, and effective mitigation. Integrating advanced data analytics, AI, and sensor networks, ADOA establishes a robust real-time surveillance system. Predictive modeling and machine learning identify subtle patterns and anomalies in animal behavior, health, and environmental factors, allowing early outbreak detection. Operating on a collaborative platform, ADOA connects veterinarians, researchers, farmers, and stakeholders, enhancing communication and information sharing. This network enables swift, targeted interventions, such as vaccinations, quarantines, and resource allocation, improving response efforts and outcomes.

1343. REPAIRBUDDY

Project Advisor	MR. USMAN AAMER
Status	Complete

RepairBuddy simplifies troubleshooting and connects users with reliable repair services for electronic devices. Using AI-driven chatbots and a network of vetted vendors, it guides users through issue diagnosis with natural language processing and a comprehensive database. If issues persist, RepairBuddy facilitates direct communication with reputable repair professionals, ensuring efficient problem resolution. Continuous user feedback enhances the platform, aiming to revolutionize electronic device support and repair experiences.

1344. AUTO MAGIC - AI POWERED CUSTOMER RESEARCH AND FEEDBACK ANALYSIS

Project Advisor	MR. USMAN AAMER
Status	Complete

"Auto Magic" is an AI-powered platform designed to address the challenge of efficiently processing large volumes of customer reviews and feedback. By automating data collection, categorization, and interpretation, it enables businesses to make informed, data-driven decisions. Leveraging AI algorithms, natural language processing, and sentiment analysis, "Auto Magic" extracts actionable insights from diverse sources to enhance products and services. Key knowledge areas include SQL, the MERN stack, and Python. The project delivers a desktop GUI, web scraping capabilities, and seamless integration. "Auto Magic" revolutionizes customer feedback analysis, offering a user-friendly, secure, and cost-effective solution, poised to become a valuable tool for businesses seeking real-time insights and improved decision-making.

1345. VERDURE DIVINATION ALLY

Project Advisor	MR. USMAN AAMER
Status	Complete

In biodiversity conservation and ecological research, precise plant species identification is crucial. This project automates the identification of about 300 plant species using the Pl@ntnet 300k dataset. Our methodology employs Convolutional Neural Networks (CNNs) to discern unique visual features of each species, providing a robust, scalable solution for plant recognition. By integrating artificial intelligence and deep learning, we aim to create a user-friendly tool that empowers experts and enthusiasts to identify plant species easily. This interdisciplinary endeavor combines machine learning and botany, with CNNs mimicking the human visual system to learn and extract intricate patterns from images. The Pl@ntnet 300k dataset ensures our model adapts to diverse real-world scenarios, ultimately yielding a model capable of accurately classifying plant species.

1346. AI-POWERED CAREER COUNSELLING ALLY

Project Advisor	MR. USMAN AAMER
Status	Complete

Our proposed system aims to address the lack of efficient and accessible career counseling services. Career choices significantly impact personal development, financial security, and overall well-being, yet many struggle to choose a professional path that aligns with their abilities, interests, and goals. Traditional career counseling can be expensive and geographically limited, often requiring in-person meetings with specialists. Additionally, a one-size-fits-all approach may not meet the diverse needs and preferences of individuals. This project leverages Artificial Intelligence (AI) and the Naive Bayes

algorithm to provide personalized and data-driven career counseling on a large scale, addressing these issues and making career guidance more accessible and effective.

1347. VISUMEET

Project Advisor	MR. USMAN AHMED RAZA
Status	Complete

"VISUMEET" innovates virtual meetings with enhanced engagement and collaboration features. It aims to overcome traditional online meeting platform limitations by introducing seamless communication, dynamic presentations, and interactive discussions. The project emphasizes an intuitive interface supporting high-quality video/audio streaming, real-time document sharing, and interactive whiteboards. Advanced scheduling and notification systems streamline meeting management. Leveraging cutting-edge technology, VISUMEET aims to revolutionize remote team collaboration, enhancing productivity and efficiency across diverse professional settings.

1348. ADVENTURE ADORN

Project Advisor	MR. USMAN AHMED RAZA
Status	In Process of Completion

Everyone needs a break from their everyday life, and vacations offer more than just fun—they allow exploration of new areas. Tourism, whether for pleasure or business, involves various services like hotels, restaurants, and malls. In Pakistan, tourism has rapidly increased, with people often asking which places to explore and how to get there. Travel applications with detailed maps, distance information, nearby dining and lodging options, and budget calculations are essential. These apps can provide cost details for staying, eating, and visiting places, ensuring travelers are well-prepared. An ideal travel application, like "Adventure Adorn," can address all these needs, making travel planning seamless. It fulfills every traveler's needs, ensuring a convenient and enjoyable journey.

1349. CDE (CLINICAL DOCUMENT EXTRACT)

Project Advisor	MR. USMAN AHMED RAZA
Status	Complete

Clinical Document Extract (CDE) is a mobile-based system designed to convert unstructured handwritten clinical documents into structured data. Using Natural Language Processing (NLP) with the Spacy library, CDE identifies key entities such as patient names, medical conditions, medications, dosages, and dates. The project tackles the challenge of handwritten prescriptions by developing an Optical Character Recognition (OCR) system. Leveraging machine learning and deep learning models, it accurately digitizes handwritten prescriptions, enhancing patient safety and healthcare efficiency. The project includes data collection, preprocessing with Python and OpenCV, model development with TensorFlow, and app creation with Flutter. The result will be a user-friendly mobile app that streamlines the prescription process and improves healthcare workflows.

1350. BEST CANDIDATE PREDICTOR

Project Advisor	MR. USMAN AHMED RAZA
Status	Complete

The "Best Candidate Predictor" automates and enhances hiring processes through AI and automation, significantly reducing candidate screening time. It conducts initial screenings, technical tests, and

personality assessments tailored to company criteria. Using Natural Language Processing (NLP), it evaluates communication skills via resume analysis and interviews. This platform accelerates hiring, ensuring accurate candidate selection and providing candidates with a fair opportunity to showcase their skills. Integrated AI, NLP, software engineering, and user interface design optimize the hiring experience for both organizations and applicants.

1351. STORM BAR BENZ C63

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

We are developing an online racing game featuring real-time multiplayer capabilities, realistic physics, and weather effects. Players can race against each other or AI, which takes over if a player disconnects. The game includes three difficulty levels, a leaderboard, a damage system, and dynamic AI difficulty progression. Enhancements like replay sharing, tutorials, and an immersive soundtrack elevate the experience. However, issues like lag and bugs can harm player experience and game popularity, potentially damaging the developer's reputation. Network and device compatibility are crucial for multiplayer games, as they affect user experience. Realistic car collisions, physics, and high-quality graphics and audio are vital for immersion. Designed for players over 8, the game offers multiplayer racing, diverse weather conditions, AI competition, and varied tracks for Android users.

1352. HEALTHFULL HARMONY

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

Food is a vital component of human existence, playing a crucial role in our lives. Nowadays, people seek recipes that match their ingredient availability, health concerns, and cooking skill level. Many struggle to find recipes that meet their specific needs, especially those with health concerns or limited culinary skills. HealthFull Harmony is an innovative mobile app designed to solve this problem. It caters to individuals like diabetics, heart patients, diet-conscious people, and those seeking unique recipes based on their diet preferences, available ingredients, and skill level. By inputting their details, users receive personalized recipe recommendations, making it easier to prepare healthy and enjoyable meals. This app aims to benefit patients, the young generation, and anyone seeking tailored recipes in one convenient platform.

1353. ELECTROTECH

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

"ElectroTech" redefines the online shopping experience for electronic gadgets, addressing issues like information overload, lack of personalization, and sustainability. In response to the evolving electronics industry, "ElectroTech" features AR Try-On, Virtual Shopping Assistant, and AI-Powered Reviews Analysis to enhance user experience and streamline product selection. These features, supported by AI algorithms and predictive analytics, provide personalized recommendations and optimize user-generated content. The project spans software engineering, algorithm development, web development, machine learning, HCI, networking, and UI/UX design. It aims to drive increased traffic, longer user sessions, and higher sales by offering a compelling, user-centric shopping experience, ultimately transforming electronic gadget e-commerce.

1354. SDGOCITY

Project Advisor	MS. AYESHA ZAHEER
Status	Complete

SDGOCITY is an innovative final year project aimed at transforming urban living through the integration of smart city concepts and Sustainable Development Goals (SDGs). The project focuses on creating a comprehensive platform that enhances city management and promotes sustainability. SDGOCITY addresses critical urban challenges such as waste management, energy efficiency, transportation, and public safety by implementing data-driven solutions. The platform offers real-time monitoring, analytics, and citizen engagement tools to ensure efficient resource utilization and improved quality of life. By aligning with SDGs, SDGOCITY aspires to foster sustainable urban development, making cities more resilient, inclusive, and environmentally friendly. The project's outcomes include a user-friendly interface, actionable insights, and a significant contribution to smart city initiatives.

1355. CLOTHING WEBSITE CHATBOT: REVOLUTIONIZING CUSTOMER ENGAGEMENT AND PERSONALIZED SHOPPING WITH A CHATBOT

Project Advisor	MS. BEENISH ZAFAR
Status	Complete

Our project aims to solve a common problem on websites where people must wait a long time to get answers to their questions. You must send messages or emails, and it can take a very long time to get a response. Also, if someone wants to try a look virtually there is no option on the websites for this. So, to fix this, we're introducing two cool things on our website: Chatbot and Augmented Reality (AR). Chatbot is like a helpful robot that can quickly answer questions. It's available 24/7, so you can get help anytime. We're also adding AR technology. With AR, you can try on clothes virtually, so you can see how they look on you before you buy them. This makes online shopping more fun and helps you decide what to buy faster. Our project uses Chatbot and AR to make our website more user-friendly.

1356. VR MULTIUSER PODCASTING APPLICATION

Project Advisor	MS. FAIZA KHADIM
Status	Complete

The Virtual Reality (VR) Multiuser Podcasting App redefines podcasting by integrating VR technology for an immersive audio content experience. Users can easily register and create customizable avatars to establish unique identities in the virtual space. The app focuses on creating and participating in virtual podcast rooms, fostering dynamic discussions. An innovative recording feature allows users to capture and share content within the VR environment, enhancing community engagement. Meticulous attention to functional and nonfunctional requirements ensures a user-friendly, secure, and high-performance application. The VR Multiuser Podcasting App represents a pioneering leap into the future of collaborative and immersive podcasting.

1357. "DAWAAM FOOD" AN ECOMMERCE GROCERY SHOPPING APP

Project Advisor	MS. FAREEHA IQBAL
Status	Complete

In this modern era many people find it difficult to buy home goods online especially people with varying levels of literacy and technological familiarity. Dawaam Foods aims to overcome these hurdles by its user-friendly interface that simplifies the shopping experience and voice search feature, making it accessible for a larger audience. This project makes use of experience with Flutter for user-friendly frontend development and Node.JS for backend development. Expected outcomes include a feature rich mobile application offering recommendations, real-time chat feature, and customer loyalty rewards. This project not only aligns with contemporary user preferences but also showcases the team's proficiency in cutting-edge technologies, ultimately contributing to an evolved landscape in online commerce.

1358. SQLIFY: NATURAL LANGUAGE TO SQL CONVERTER

Project Advisor	MS. HINA TAHIR
Status	Complete

This project aims to develop a solution bridging natural language and SQL queries. It utilizes NLP techniques to enable easy database interaction for non-technical users. The project's significance lies in simplifying data retrieval, making it accessible across industries. The outcome will be a user-friendly interface that enhances data accessibility and usability. This project has the potential to revolutionize data interaction and decision-making processes.

1359. CODE VIA UML

Project Advisor	MS. SADIA ASLAM
Status	Complete

CODE VIA UML is a web-based tool that converts UML class diagrams into C++, Java, and Python code, aiming to streamline software development. It addresses the issue of developers neglecting UML diagrams, which can lead to inefficient processes and code errors. By automating code generation from UML diagrams, the platform promotes a systematic approach to application design and implementation. Users can draw or upload UML diagrams, and the system intelligently recognizes class elements and relationships to produce accurate code. This automation reduces manual coding, encourages best practices in software development, and improves the overall development experience. Additionally, the tool includes features for handling sorting functions in the generated code, ensuring alignment with user requirements.

1360. ORCHARDSENSEX: MANGO DISEASE DETECTION USING IMAGE PROCESSING AND MACHINE LEARNING

Project Advisor	MS. SADIA ASLAM
Status	Complete

This project tackles mango disease in Pakistan using advanced technology for automated detection, focusing on diseases like anthracnose and bacterial black spot that significantly impact yield. It integrates image analysis and machine learning with SVM, K-MEANS, and CNN algorithms. A mobile app will deliver real-time insights for timely disease management, aiming to empower farmers and improve mango production sustainably. By merging innovation with agriculture, the project aims to revolutionize mango farming with a transformative tool for disease detection and treatment.

1361. ADVENTURA: YOUR GATEWAY TO UNFORGETTABLE ADVENTURES

Project Advisor	MS. SADIA ASLAM
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Status	Complete
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In a world where travel enriches lives, adventurers often struggle to find reliable, up-to-date information about their destinations. Conventional reliance on scattered sources, language barriers, and limited local insights lead to inefficient trip planning and missed opportunities. To address these challenges, our innovative tourist guide website, "Adventura," redefines how travelers experience their journeys. Adventura offers personalized recommendations, interactive maps, and multilingual support, enhancing user experience. Committed to continuous refinement, we aim to empower travelers worldwide, guiding them toward seamless and unforgettable adventures. Adventura becomes their trusted resource for wanderlust exploration. Adventure beckons; Adventura answers the call.

1362. ARTIZEN MARKET: YOUR SUSTAINABLE MARKETPLACE

Project Advisor	MS. SADIA ASLAM
Status	Complete

"ArtiZEN" proposes an AI-driven web-based marketplace focusing on transparent pricing and product condition assessment to promote fairness and sustainability in e-commerce. By leveraging AI and machine learning, the project aims to enhance user trust and eco-friendly practices, addressing current issues of transparency and user dissatisfaction. The outcomes include improved tools for pricing and condition assessment, fostering a marketplace that prioritizes user satisfaction and environmental responsibility.

1363. AUTO-EXPERT EASE: REVOLUTIONIZING THE AUTOMOBILE INDUSTRY WITH INNOVATION

Project Advisor	MS. SADIA ASLAM
Status	Complete

Auto-Expert Ease aims to revolutionize Pakistan's automobile industry by connecting users with service vendors directly at their desired locations. The platform offers a user-friendly interface for seamless navigation and quick service access. Key features include an expert-hailing system where users post tasks with customized fees and receive offers from registered mechanics. The eCommerce function allows users to buy validated products from vendors. Home services like car washes, oil changes, and part replacements are available. Direct vehicle renting is facilitated through vendor posts. The platform also supports business listings for automotive companies to showcase their products. Users can find and post driving lessons, and a review and rating system empowers feedback between users and service providers.

1364. NARRATCHES

Project Advisor	MS. SIDRA KHALID
Status	Complete

"Narratches" is an innovative Android-based 2D storytelling game designed to provide an immersive and educational experience. Players craft meaningful stories by making choices that shape the narrative, learning life lessons such as kindness, honesty, empathy, and ethical decision-making through engaging gameplay. Inspired by "Storyteller" on Steam, "Narratches" aims to fill a gap in the Android gaming market. The methodology includes story development, logic design, character creation, backend development, and graphical design. Using decision trees and diverse characters, the game ensures creative freedom and narrative coherence. "Narratches" fosters critical thinking,

problem-solving, emotional intelligence, and ethical behavior, potentially influencing real-life decisions and relationships. The game aspires to reach a broad audience, enriching lives with valuable lessons while offering an engaging and visually appealing experience.

1365. THE MYSTERY OF HAVENTOWN

Project Advisor	MS. SIDRA KHALID
Status	Complete

The project "Haven Town" is an immersive adventure game that follows the journey of four friends who embark on a camping trip to a hill station on the night of the full moon. Their peaceful outing takes a mysterious turn as two of their friends disappear, and they find themselves in an evacuated and eerie town. The game's narrative is driven by the friends' quest to uncover the truth behind the disappearances, battle inner fears, and confront the shadows of their own selves. This summary provides an overview of the key challenges and solutions the friends encounter throughout their journey.

1366. THE LOST WORLD

Project Advisor	MS. SIDRA KHALID
Status	Complete

Embark on a thrilling VR adventure with "The Lost World," a game developed by our team for Oculus Quest 2. Plunged into the virtual realm, players begin in a serene tutorial before facing the ominous Demon Forest. Armed with sword and bow, they combat goblin hordes, earning gems as rewards. The journey unfolds through encounters with a trapped dragon, quests in a bustling city, and battles in a dynamic arena. As players progress, they rise in rank, unlock missions, and ultimately rescue a kidnapped princess. "The Lost World" integrates captivating storytelling, immersive gameplay, and strategic challenges, aiming to redefine the VR gaming experience and contribute to the evolution of virtual adventures.

1367. TOON TRAILS

Project Advisor	MS. SIDRA KHALID
Status	In Process of Completion

"Toon Trails" is a 3D adventure game set in a vibrant toon world threatened by the encroaching darkness of the Shadow Blot. Players embark on an epic journey with three main characters—Sugar Sprinkle, Willow Whisperleaf, and Marina Meriwisp—across Candy Land, Forest, and Underwater chapters. They engage in battle, strategic thinking, and problem-solving to defend their fantasy realm. Blending captivating storytelling, colorful visuals, and interactive gameplay mechanics, "Toon Trails" offers both entertainment and educational value in 3D modeling and animation. The game targets players of all ages, encouraging exploration, puzzle-solving, and strategic combat while promoting accessibility through a user-friendly web page for easy game access and download.

1368. CHIT CHAT

Project Advisor	MS. ZUPASH AWAIS
Status	Complete

"CHIT CHAT" is a cross-platform mobile app redefining messaging in today's interconnected world. It integrates text-based chat with voice note recording, playback, and speech-to-text capabilities, <S25BS005>

alongside real-time language translation. This innovative app enhances communication by addressing challenges such as managing lengthy voice messages and overcoming language barriers. Additional features like customizable notification sounds, chat auto-deletion, and a dedicated "Groups" tab optimize user experience, facilitating efficient group management and fostering meaningful connections.

1369. ROTTEN FRUITABLES DETECTOR

Project Advisor	MS. ZUPASH AWAIS
Status	Complete

This project addresses the risk of fruits and vegetables spoiling in farming, leading to losses. We are developing a simple phone app using deep learning and computer vision to help users determine the freshness of produce through pictures or videos. Users can share feedback, enhancing the app's intelligence over time. This app serves as a helpful tool for farmers and food businesses, aiming to improve efficiency and reduce waste. By ensuring top-quality produce, it promotes better practices in farming and food businesses, contributing to a healthier supply chain. The app ensures everyone gets the best fruits and vegetables without waste.

1370. PLAYGROUND WARRIORS

Project Advisor	MR. FARAZ ALI
Status	Complete

Playground Warrior is an innovative gaming concept aiming to revive imaginative play among children within dynamic playground environments. Featuring four vibrant maps and nine diverse anime-styled characters, each equipped with a unique set of nine cards enhancing their abilities, the game encourages imaginative adventures and strategic battles. Players navigate through playgrounds, encountering obstacles and diverse enemies, triggering engaging battles requiring creativity and wit to succeed. Progression unlocks new stages, fostering exploration and imaginative growth. In-game currency, diamonds, earned through gameplay or purchasable online, facilitate character upgrades. By merging imaginative play, physical activity, and interactive gaming, Playground Warrior seeks to enrich children's cognitive and social development, serving as a beacon for creative play in a digitally immersive landscape.

1371. CIRCUITOUS AUTOMATION

Project Advisor	MR. SYED NISAR BALTI
Status	Complete

In many contemporary buildings, the control and management of electric devices, such as lights, fans, projectors, air conditioning systems, and computers, are typically executed manually. This manual approach presents several challenges that hinder efficiency, energy conservation, and user convenience. Automating building control via a website offers numerous benefits, including convenience, energy efficiency, cost savings, enhanced security, and personalized user experiences. The successful implementation of such a system requires expertise in web development, back-end development, database management, networking, IoT, and security. This integration enhances overall building management, leading to smarter, more efficient, and user-friendly environments.

1372. BILLBOARDEASE

Project Advisor	DR. ABDULLAH YOUSAFZAI
Status	Complete

"BillBoardEase" modernizes outdoor advertising in Pakistan by introducing a streamlined digital platform. Advertisers can easily find billboard spaces, place ads, and make secure payments. A dynamic bidding system optimizes revenue for billboard companies. This initiative improves transparency and efficiency in advertising, using software engineering and web development to enhance accessibility and user experience.

1373. VIGILEYES

Project Advisor	DR. ABDULLAH YOUSAFZAI
Status	Complete

VigilEye is a Windows application designed to bolster security by automatically detecting criminal activities in camera feeds. Using image processing and machine learning, it monitors in real-time and highlights relevant camera views. The system captures video frames, preprocesses them, and employs feature extraction algorithms and deep learning models to identify suspicious behaviors. Trained on extensive criminal activity datasets, VigilEye overlays indicators on camera feeds upon detecting crimes, facilitating rapid response. This innovative solution enhances surveillance efficiency, minimizes manual monitoring errors, and advances real-time crime prevention through automated detection and highlighting of criminal activities.

1374. PAPERLESS OFFICE AS A SERVICE

Project Advisor	DR. ABDULLAH YOUSAFZAI
Status	Complete

In today's fast-paced and environmentally conscious world, the excessive use of paper in traditional offices poses significant challenges. Reliance on paper documents leads to inefficient workflow management, difficulties in document retrieval, increased costs, and environmental harm. Manual paperwork handling often causes delays, errors, and data security risks. Addressing these issues requires a comprehensive paperless office solution. An ideal solution streamlines workflow from request generation to task assignment and document management while promoting sustainability and reducing paper reliance. Implementing our web application will transform offices into eco-friendly, collaborative workspaces. The resulting time and cost savings will enhance organizational budgets, streamline processes, and boost productivity, ultimately improving user satisfaction and efficiency.

1375. THE AI BRAIN ROBOT PERSONAL ASSISTANT (MISHI)

Project Advisor	DR. ABDULLAH YOUSAFZAI
Status	Complete

Mishi is an advanced AI Brain Robot Personal Assistant designed to overcome the limitations of current virtual and robotic assistants. It integrates AI, natural language processing, computer vision, machine learning, robotics, and human-computer interaction to enhance contextual understanding, empathy, mobility, and adaptability. Mishi aims to offer a more intuitive, empathetic, and human-like interaction experience, capable of understanding and conversing like a human, recognizing objects,

and navigating environments efficiently. This project seeks to redefine human-AI interactions, creating a seamless and integral part of users' daily lives.

1376. PERSON RE-IDENTIFICATION (REID)

Project Advisor	DR. ABDULLAH YOUSAFZAI
Status	Complete

Person re-identification is a critical computer vision challenge aimed at identifying individuals across non-overlapping camera views under varying conditions such as changes in pose, lighting, and attire. This project leverages deep learning techniques, particularly Siamese networks and similarity metrics, to create robust embeddings for accurate person matching. The significance lies in enhancing public safety and security by improving surveillance capabilities in smart cities, transportation hubs, and large venues. By employing deep learning, feature extraction, and similarity measurement, the project aims to achieve high-accuracy person matching across different camera views, evaluated on benchmark datasets to ensure accuracy, robustness, and computational efficiency, ultimately advancing surveillance and security technologies.

1377. MAK TABA-TUL-AHADITH

Project Advisor	DR. ALI SAEED
Status	Complete

"Maktaba-tul-Ahadith" is a comprehensive web application designed to provide accessible and authentic Islamic knowledge and services globally. It features Quranic translations with linguistic insights, AI-driven thematic verse retrieval, and a vast collection of Hadith. The platform supports Arabic, English, and Urdu languages with robust search functionality. It includes an AI chatbot for personalized inquiries, prayer timings, an Islamic calendar, a zakat calculator, biographies, and an Arabic learning course. "Maktaba-tul-Ahadith" aims to deepen understanding of Islamic teachings through innovative technology and scholarly resources.

1378. AI -BASED AUTO EVALUATION SYSTEM

Project Advisor	DR. ALI SAEED
Status	Complete

This project aims to revolutionize MCQ evaluation in educational institutions by developing an AI-based MCQs Checker integrated with a comprehensive Teacher Portal. It addresses inefficiencies and subjectivity in manual evaluations, which often lead to inconsistencies and time constraints. By leveraging advanced AI algorithms, the solution automates the assessment process, improving accuracy, speed, and objectivity. The Teacher Portal acts as a centralized hub for managing assessments, monitoring student progress, and analyzing question effectiveness. Key technologies include AI, NLP, Machine Learning, and Educational Technology. The outcome is a robust MCQs Checker that provides instant feedback and detailed analytics, thereby streamlining the assessment workflow for educators.

1379. FACESCAN: MOOD RECOGNITION SYSTEM

Project Advisor	DR. ALI SAEED
Status	Complete

The "FaceScan: Mood Recognition System" project seeks to address the challenge of gauging student engagement and mood in traditional classroom settings. It aims to leverage facial recognition technology to provide educators with real-time insights into classroom dynamics. The project includes mood detection, blacklist features, and attendance tracking. By analyzing facial expressions, body language, and engagement levels, the system assigns percentage values to different emotions, allowing educators to tailor their teaching methods. The project's objectives include enhancing classroom management, improving student engagement, and ensuring accurate attendance tracking.

1380. RESUME FILTRATION SYSTEM

Project Advisor	DR. ALI SAEED
Status	Complete

The "Resume Filtration System" modernizes recruitment with NLP and machine learning to automate and improve resume screening. It surpasses keyword-based methods by extracting nuanced information from resumes. Machine learning models continuously enhance candidate evaluation, ranking them against defined criteria to aid recruiters in efficient decision-making. By transforming unstructured resume data into actionable insights, it mitigates information overload and promotes equitable hiring practices, fostering diversity, equity, and inclusion in the workplace.

1381. BEST BUY FINDER WEBSITE

Project Advisor	DR. ANAM MUSTAQEEM
Status	Complete

As we know that the online shopping is getting more and more day by day but there is a problem that people can't trust on the product they are ordering so our website will help them to select the best product from different websites according to rating and prices on a single platform, we are using MERN stack for web development and to scrape the data from websites we have decided to use Puppeteer along with Node.js, the website ensures that users' money is used in the right place our website displays top-rated products with reliable information, including ratings and prices, so that users can confidently make informed purchasing decisions.

1382. AUTOFACE-X

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

"AutoFace-X" is a groundbreaking web platform revolutionizing car customization in Pakistan. Integrating real-time pricing and availability data from trusted auto shops, it offers users an intuitive 3D visualization experience for customizing their vehicles. With a focus on user satisfaction, brand comparison, and secure transactions, "AutoFace-X" aims to streamline and elevate the car customization journey for enthusiasts.

1383. NEXGEN ARCADE (GAME STORE)

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	Complete

NEXGEN ARCADE is a dynamic game store platform designed to revolutionize the gaming experience for users. This project aims to create a comprehensive digital marketplace where gamers can browse, purchase, and download a wide variety of games. By offering a user-friendly interface, <S25BS005>

NEXGEN ARCADE ensures seamless navigation and access to the latest and most popular titles across multiple genres. The platform will also feature user reviews, ratings, and recommendations to help gamers make informed choices. Additionally, it will support social features such as friend lists and multiplayer game sessions, fostering a vibrant community of gamers. NEXGEN ARCADE is poised to become a one-stop destination for all gaming enthusiasts.

1384. EVAHIRE

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

EVAHIRE is an innovative recruitment platform designed to streamline and enhance the hiring process for organizations and job seekers. The project aims to simplify recruitment by providing a comprehensive system that facilitates job posting, application tracking, and candidate evaluation. EVAHIRE offers an intuitive interface for employers to post job openings, manage applications, and identify top talent efficiently. For job seekers, the platform provides easy access to job listings, allowing them to apply and track their application status seamlessly. By bridging the gap between employers and potential employees, EVAHIRE seeks to improve the overall efficiency and effectiveness of the recruitment process, ensuring a better match between job opportunities and candidate skills.

1385. REPAIR BUDDIES

Project Advisor	DR. NAUMAN MAZHAR
Status	Complete

Repair Buddies is an Android app designed to streamline the process of finding highly-rated mechanics or electricians. Simply download the app, create an account, and enter your vehicle's details. The intelligent algorithm matches you with specialists in your area. Enter your problem, and the app shows nearby experts. Choose a mechanic based on ratings, contact them, and they will come to your location to assess and fix the issue. Payment can be made upfront or online. Mechanics can upload before-and-after job pictures to strengthen their profiles. The app offers on-road and at-home services, maintains a record of previous experiences, and features a user-friendly interface.

1386. AUTO AGRO(CROP FRUIT VEG HUB)

Project Advisor	MR. ABID BASHIR
Status	Complete

This project aims to address challenges in the agriculture industry through the development of an online platform called Auto Agro(CropFruitVegHub). The platform serves as a comprehensive solution to improve access to fresh produce, enhance market transparency, and promote sustainable farming practices. By integrating features such as a Knowledge Hub, Sell and Buy Marketplace, Seasonal Display, Seller Dashboard, and a Customer Support Chatbot, Auto Agro aims to connect farmers directly with consumers, provide valuable agricultural information, and facilitate efficient buying and selling.

1387. THE BREAD WAY

Project Advisor	MR. ABID BASHIR
Status	Complete

"The Bread Way" is an innovative online platform designed to connect bakery enthusiasts with the best bakeries in their vicinity. Our user-friendly website offers a diverse range of baked goods, including bread, custom cakes, cupcakes, and donuts, and provides customization options for special occasions. Additionally, it facilitates direct communication between users and bakery owners for a personalized experience. Join us on this scrumptious journey and explore the diverse world of baking delights, all in one convenient place.

1388. CANCEROUS CELL SEGMENTATION APPLICATION

Project Advisor	MR. ADEEL ARIF
Status	Complete

The diagnosis of cancer is hampered by a difficult, subjective procedure that depends on pathologists. Treatment delays can result from the manual evaluation of histology slides, prone to error and worsened by a lack of pathologists. The computer-assisted systems currently in use are not very user-friendly. For cancer diagnostics to become more accessible and efficient, a comprehensive solution is essential. The primary goal of our web application, CANCODOC, is to develop an intuitive platform that allows medical professionals to upload histology samples. The platform seeks to eliminate the need for manual evaluation by automating the identification and localization of malignant cells using deep learning and computer vision.

1389. AI BASED RESUME PARSER

Project Advisor	MR. ADEEL ARIF
Status	Complete

The "AI-Based Resume Parser" project aims to revolutionize the recruitment process by streamlining the extraction and analysis of resume data. This system automatically processes resumes to identify key information such as skills, experience, education, and contact details. By leveraging artificial intelligence, the parser enhances accuracy and efficiency, significantly reducing the time and effort required for manual data entry and review. This tool not only benefits employers by providing a more effective candidate screening process but also improves the applicant experience by ensuring fair and unbiased evaluations. The project envisions creating a seamless interface for easy integration into existing recruitment systems, thus optimizing the hiring workflow.

1390. TETRA CRYPTO DEFI PLATFORM

Project Advisor	MR. ADEEL ARIF
Status	Complete

The Tetra Crypto DeFi Platform caters to traders and individuals interested in DeFi (Decentralized Finance) markets, facilitating simultaneous buying and selling of securities based on statistical models and analysis. Designed to meet the needs of intraday, swing, newcomer, scalp, and long-term traders, the platform emphasizes understanding market dynamics through trading patterns, price action, portfolio management, risk-reward ratios, candlestick analysis, and support and resistance. By providing comprehensive tools and insights, Tetra Crypto DeFi aims to enhance trading strategies and decision-making, making it an invaluable resource for both novice and experienced traders in the DeFi space.

1391. MALWARE DETECTION USING MACHINE LEARNING TECHNIQUES: ENHANCING CYBERSECURITY IN THE DIGITAL ERA

Project Advisor	MR. ADEEL ARIF
Status	Complete

This project introduces a robust malware detection system leveraging machine learning techniques, specifically designed to identify and neutralize three distinct types of cyber attacks. Utilizing a comprehensive dataset, the model underwent extensive training to recognize patterns and anomalies associated with each attack type. The system's effectiveness was rigorously evaluated against these attack vectors, demonstrating significant improvements in detection accuracy and response time compared to traditional methods. This research not only enhances cybersecurity measures but also paves the way for adaptive, AI-driven solutions in digital threat management.

1392. AI-BASED CHEAP FLIGHT FINDER

Project Advisor	MR. AHSAN AZHAR
Status	Complete

The AI-Based Flight Finder Project revolutionizes travel by using advanced AI algorithms to simplify and personalize flight booking. It offers cost-effective travel solutions, enhancing the user experience through an intuitive chat-based interface that assists from search to booking. The platform analyzes vast flight data to present affordable options tailored to individual preferences, ensuring a more efficient and user-centric travel planning process. Features like real-time fare alerts, flexible date searches, and comprehensive route options aim to boost user satisfaction and loyalty. This innovative tool redefines travel planning, making it more accessible and personalized for modern travelers.

1393. KIDNEY HEALTCARE

Project Advisor	MR. AHSAN AZHAR
Status	Complete

Chronic kidney disease (CKD) is a condition where the function of kidney worsens over time. It causes the harm to kidney and overall health of the body. And if proper diagnoses and treatment is not done in time then it leads to fatal stage which is end-stage renal disease (ESRD). So, to cater this problem we employed machine learning techniques to detect and predict the ESRD on basis of given parameters in dataset. In this project, dataset is obtained from Journals website article. Along with ESRD prediction and detection, the system also has the ability to suggest healthy diet, setting appointment with nearby doctor, keeping track of medications, and chatting with virtual doctor.

1394. CYBERSAFESPACE

Project Advisor	MR. AHSAN AZHAR
Status	Complete

"Cybersafe Space" is an online platform offering a secure environment for cyberbullying victims. It prioritizes user privacy and anonymity, enabling individuals to share their experiences safely. The platform connects victims with mental health professionals for guidance and support. Key features include a secure messaging system, resource library, discussion forums, crisis intervention measures, and robust content moderation to maintain a respectful community. Educational content on cyberbullying awareness and a language filter ensures respectful discourse by addressing inappropriate

language and false comments. "Cybersafe Space" serves as a supportive, informative refuge for victims, safeguarding their well-being and privacy.

1395. CROWDFUNDING DAPP

Project Advisor	MR. AHSAN AZHAR
Status	Complete

This project proposes creating a novel Decentralized Crowdfunding Platform built on the Ethereum blockchain. It addresses the limitations of existing centralized crowdfunding platforms, such as high fees, centralized control, and censorship concerns. By integrating blockchain technology and smart contracts, the platform offers reduced transaction fees, enhanced transparency, and a censorship-resistant environment. Ethereum's blockchain ensures robust security and decentralized operation, while smart contracts facilitate automated, trust-based transactions between project creators and backers. This approach lowers operational costs by eliminating intermediaries, making crowdfunding more accessible. The anticipated outcome is a democratized funding mechanism that promotes innovation and reinforces trust among participants, potentially transforming the crowdfunding landscape.

1396. REMOTE TEAMWORK ADMINISTRATION

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Complete

Managing remote teams in today's digital work environment presents challenges in communication, productivity, and coordination. RTA (Remote Teamwork Administration) offers an integrated management system with seven modules: employee management, payroll processing, applicant tracking, biometric attendance, project management, remote team tracking, and meeting management. RTA aims to streamline workplace management, enhance accountability, and optimize productivity for remote teams. Leveraging expertise in IT, HRM, software development, finance management, data analytics, project management, UX design, AI, data security, cloud technology, and software architecture, RTA supports efficient and connected remote workforce operations.

1397. PRODUCTIVE HOUR

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Complete

"Productive Hour" is a smart tool that enhances team productivity, especially in remote work settings. It organizes tasks and tracks time usage, allowing team leaders to assign and monitor tasks via computers, web, or mobile devices. "Productive Hour" also tracks computer activity, noting app usage and time spent. This data is securely stored and accessible on a simple dashboard, giving leaders an overview of team activities while helping members focus on their tasks. Developed using C# and JavaScript, with a strong emphasis on data security, "Productive Hour" simplifies task management and time tracking, making remote work more efficient and successful.

1398. CIVIC NATION

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Complete

CIVIC NATION is an innovative platform designed to enhance civic engagement and community involvement. This project addresses the need for streamlined communication between citizens and local government, fostering transparency and collaboration. By providing a centralized hub for information, resources, and interactive tools, CIVIC NATION empowers individuals to participate actively in their communities. Users can access updates on local initiatives, report issues, and engage in discussions on civic matters. The platform aims to bridge the gap between citizens and government, promoting informed decision-making and collective problem-solving. Ultimately, CIVIC NATION aspires to cultivate a more connected, responsive, and engaged society.

1399. NUTRIVISE - NUTRITION CONSULTATION APP

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Complete

In a world increasingly committed to health and well-being, "NutriVise" emerges as an innovative and transformative solution, addressing limited access to expert nutrition guidance. This project bridges the gap by offering virtual consultations with certified nutritionists, secure payment options, personalized dietary plans, and real-time in-app messaging. It provides advanced educational resources such as articles, meal plans, recipes, and exercise routines, empowering users with knowledge. A chatbot answers common queries, and a discussion forum fosters community engagement. With features like a calorie calculator and BMI monitor, "NutriVise" enhances user experience and promotes healthier dietary choices. The expected result is a seamless, accessible platform that empowers users to achieve sustainable health improvements.

1400. FEEL-THE-TEXT: A BRAILLE-INSPIRED TACTILE READING DEVICE

Project Advisor	MR. HAIDER SULTAN AHAD
Status	Complete

The "Feel-the-Text: A Braille-Inspired Tactile Reading Device" project aims to revolutionize accessibility for visually impaired individuals. By combining tactile reading and text input into a single device, the project addresses existing inefficiencies in assistive technologies. The device incorporates a unique Braille-inspired tactile feedback system with six mini coin vibration motors arranged in a 2x3 grid for reading text. Small click buttons beneath the motors allow users to input text via a touch-based keyboard. This innovative approach streamlines the reading and input processes, offering a versatile solution for visually impaired users.

1401. TABLETECH

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

Our advanced technology replaces traditional menus with interactive menus displayed on customers' tables. Customers can easily browse menus, select dishes, and place orders using gestures detected by cameras, eliminating the need for paper menus and reducing reliance on waitstaff. This system ensures order accuracy and efficiency, benefiting both customers and restaurant operations. It allows staff to provide personalized service and focus on enhancing customer satisfaction. Additionally, the system tracks orders and user data in a database, enabling restaurants to monitor sales and user experience. This innovative approach enhances the dining experience and helps restaurants improve their operations and maximize revenue potential.

1402. WANDERWISE: PERSONALIZED TRAVEL PLANNER AND REAL-TIME SAFETY ADVISORIES

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

WANDERWISE: Personalized Travel Planner and Real-Time Safety Advisories is designed to revolutionize travel planning by offering tailored itineraries and real-time safety updates. This project aims to enhance the travel experience by providing users with customized travel plans based on their preferences and interests. Additionally, it delivers up-to-date safety advisories, ensuring travelers stay informed about potential risks and can make safe decisions on the go. The platform integrates travel recommendations, local attractions, accommodation options, and dining suggestions, creating a comprehensive travel guide. By combining personalized planning with real-time safety information, WANDERWISE aims to make travel more enjoyable and secure for users worldwide.

1403. JOBSENSE

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

The JobSense AI Chatbot is a tool designed to simplify job searching and recruitment. It streamlines finding and applying for jobs by understanding a person's preferences and showing only relevant matches. JobSense saves time by filtering out unsuitable or outdated job listings using advanced AI technology. It gathers essential job details, such as titles, locations, responsibilities, and qualifications, from various websites. This tool benefits recruiters, HR professionals, and job seekers, providing an easy-to-use interface accessible on computers and phones. JobSense aims to keep improving with market changes, ensuring accuracy and reliability, and ultimately revolutionizing job searching by reducing effort and enhancing efficiency.

1404. PARKAT

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

ParkAt is an innovative online parking system that connects vehicle owners with parking providers, offering a user-friendly interface and advanced features for seamless booking. Vehicle owners can find and book parking spots in real-time or schedule them for specific times, with detailed listings including location, price, and availability. Parking providers can list their spots, accept or reject bookings, and verify their identity and ownership documents for enhanced trust. ParkAt also offers pick-up and drop-off services, feedback and ratings, and secure integrated payment options, creating a reliable, transparent community. This platform optimizes parking space utilization and simplifies the parking experience through technology.

1405. PLANT PARADISE HUB

Project Advisor	MR. HAROON ABDUL WAHEED
Status	Complete

Plant Paradise Hub is an innovative digital platform that addresses the fragmented landscape of plant care and gardening. It offers a cohesive space where enthusiasts can access plants, gardening products, and a supportive community. This project integrates e-commerce, a community forum, and expert

advice within a single platform, aiming to foster sustainable gardening practices. Knowledge areas include software engineering for platform development, database management, machine learning for recommendation systems, and user experience design. Anticipated results include a robust digital platform enabling users to buy, discuss, and learn about plants, cultivating an engaged community passionate about green living. Plant Paradise Hub envisions becoming a digital haven that nurtures the love for plants, contributing to a healthier, greener world.

1406. GARDENSENSE: PLANT IDENTIFICATION, CARE REMINDERS, AND COMMUNITY HUB

Project Advisor	MR. HUSNAIN IQBAL
Status	Complete

GardenSense addresses the challenges faced by modern gardening enthusiasts by providing a comprehensive solution to accurately identify plant species, manage plant care, and promote community engagement through gamification. This project recognizes the limitations of existing plant identification apps and the lack of interactive gardening communities. It utilizes image recognition technology for plant identification, database management for personalized care guidance, web development for community forums, and gamification principles for an immersive virtual garden. GardenSense aims to enhance the gardening experience, foster a sense of community among enthusiasts, and make gardening more enjoyable, resulting in an accurate plant recognition system, personalized care management, vibrant community interaction, and a gamified virtual garden.

1407. SELL ANY MOTOR

Project Advisor	MR. IMRAN ASHRAF
Status	Complete

This innovative e-commerce platform revolutionizes the automotive transaction process by eliminating traditional negotiation challenges, allowing sellers to input vehicle details, and triggering a real-time bidding system among verified buyers. The streamlined 30-minute transaction timeframe ensures quick results, with sellers promptly receiving the highest bid and buyers securing desired vehicles without prolonged negotiations. The user-friendly interface, coupled with expertise in e-commerce and secure payment processing, creates a dynamic marketplace that caters to both sellers and buyers, expanding opportunities for individuals while providing a comprehensive and efficient buying experience.

1408. TAILORED ADVENTURES (YOUR TRAVEL PARTNER)

Project Advisor	MR. IMRAN ASHRAF
Status	Complete

"Tailored Adventures" is a platform for travelers that aims to revolutionize the way they plan and enjoy their journeys. The project addresses challenges faced by travelers, such as trip planning, limited budgets, and the need for personalized guidance. By utilizing cutting-edge Machine Learning and AI technologies, our application offers a combination of features including recommendations, scanning places of interest, real-time budget tracking, and an intelligent chatbot for instant assistance. Following a methodology ensures improvements and delivers a seamless and memorable travel experience. With a focus on user design and embracing advanced technologies, "Tailored Adventures" aims to become the ideal travel partner that enhances the adventures of travelers worldwide.

1409. AI DRIVEN INTERNSHIP PLATFORM

Project Advisor	MS. HIRA ASIM
Status	Complete

The "AI-Driven Internship Platform" bridges the academia-industry gap for computer science and software engineering students. Utilizing advanced AI, including ChatGPT, it offers two internship pathways: AI-driven projects guided by an AI Manager for practical experience, alongside traditional internships. The platform enhances decision-making by assessing each opportunity's relevance, adapting suggestions based on individual skills and preferences. It facilitates job offers and interviews, boosting employability and preparing students for dynamic tech industry demands, smoothing their transition from academia to professional practice.

1410. CITIZEN SCIENCE

Project Advisor	MR. ADEEL ARIF
Status	Complete

The Citizen Science mobile application represents a groundbreaking initiative aimed at combatting plastic pollution in lakes and ponds. Harnessing the power of machine learning and community involvement, the app empowers users to capture and upload images of pollution, with a focus on plastic bags and bottles. Real-time algorithms identify and catalog plastic waste, contributing to cleaner water bodies. The app serves as an educational platform, raising awareness about plastic pollution's environmental impact. Community engagement features enable users to collaborate on clean-up initiatives, fostering a collective commitment to environmental conservation. The project outlines a detailed plan, from algorithm development to app deployment, emphasizing the integration of technology and community-driven efforts to address a critical environmental challenge.

1411. GARAGE GURU

Project Advisor	MS. SARAH JAVAID
Status	Complete

Garage Guru is an intuitive Android application designed to transform how car owners connect with garages for automotive needs. It addresses the common issue of relying on nearby, potentially inexperienced garages that overcharge for simple repairs. Garage Guru ensures clear communication and offers a variety of garage choices to users. The platform bridges the gap between car owners and garages, providing a reliable solution for car maintenance and repairs. With a seamless user experience, detailed garage listings, and convenient pickup features, Garage Guru aims to make car care hassle-free, efficient, and cost-effective for all users.

1412. PODCAST 3.0

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

PODCAST 3.0 disrupts the centralized podcast streaming landscape by introducing a secure, scalable, and user-friendly decentralized platform. Creators can own podcast as NFTs, sell them via auctions, and receive direct tips. Listeners enjoy ad-free, privacy-focused streaming. The platform generated revenue through ads and NFTs sales, shared with creators. Deployed on the Eco-friendly Polygon

Blockchain, content is stored on IPFS. PODCAST 3.0 aims to revolutionize podcasting, empowering both creators and users.

1413. REAL TIME GYM TRAINER

Project Advisor	DR. FARHAN DAWOOD
Status	Complete

The "Real Time Gym Trainer" project aims to revolutionize personal fitness by offering an interactive and adaptive gym training experience. This application provides users with real-time guidance and feedback during their workouts, simulating the presence of a personal trainer. It helps users perform exercises correctly, track their progress, and customize workout plans based on their fitness goals. By incorporating real-time data analysis and user feedback, the app ensures that users stay motivated and achieve optimal results. This project is designed to enhance the effectiveness and convenience of personal fitness training, making professional guidance accessible to everyone, anytime and anywhere.

1414. HR & PAYROLL SYSTEM

Project Advisor	MR. M. FAHAD KHAN
Status	Complete

The abstract for "HR & Payroll System" addresses the core problem of manual HR and payroll management in SMEs and highlights the project's significance in revolutionizing this process. This project draws upon knowledge areas encompassing technology stack selection, algorithm design, user interface development, and data security measures. Its results aim to reduce errors, enhance accuracy, simplify tax compliance, and improve data security in payroll processes. Additionally, it introduces a groundbreaking "Smart Recruiter" feature and predictive skill analysis, empowering SMEs to streamline their talent acquisition strategies. In essence, the "HR & Payroll System" is poised to transform how SMEs manage their workforce and financial operations, offering comprehensive efficiency and strategic advantages.

1415. IMPORTICO APP

Project Advisor	MR. M. FAHAD KHAN
Status	Complete

The "Export in Pakistan" project aims to create a centralized platform for exporters to book containers and export goods efficiently. Exporters can select departure dates and times, track shipments, and calculate duty taxes based on container weight. The app provides schedules from shipping companies, allows exporters to select destinations and product types, and generates invoices after payment. It facilitates communication between exporters and companies through a chat feature and offers real-time tracking and notifications. This platform supports small exporters by simplifying the export process, reducing expenses, and providing transparency, making international trade more accessible and efficient for Pakistani businesses.

1416. GENDER CLASSIFICATION USING MACHINE LEARNING

Project Advisor	MR. M. FAHAD KHAN
Status	Complete

Gender classification using machine learning is a vital application with diverse benefits, from enhancing user experiences to enabling demographic analysis. This research employs deep neural networks to achieve high accuracy. The project involves collecting a large dataset of images and using various machine learning models to train the system. The final output is a gender classifier that can identify individuals' genders with high precision. This technology has numerous applications, including social media platforms, e-commerce websites, and customer service industries.

networks on a facial image dataset, focusing on feature extraction and classification. Through preprocessing techniques for image enhancement and feature extraction, the system utilizes a deep convolutional neural network (CNN) to learn hierarchical representations from facial data. Transfer learning with a pre-trained model enhances classification accuracy, addressing challenges related to limited labeled data. Implemented as a mobile app, the system offers real-time gender prediction for industries like marketing, security, and human-computer interaction. Evaluation metrics such as accuracy, precision, recall, and F1 score validate the model's effectiveness and efficiency.

1417. CHAT-BOT SHOPPING ASSISTANT

Project Advisor	MR. M. FAHAD KHAN
Status	Complete

The Chat-Bot Shopping Assistant project aims to transform online shopping by using advanced AI and natural language processing (NLP) technologies. It enhances the shopping experience with personalized guidance, addressing challenges like product overload and lack of effective personalization. The project involves developing a fully functional e-commerce website with an intelligent AI-powered chat-bot. This chat-bot helps users navigate the platform, find relevant products, and make informed decisions. Prioritizing data security and privacy, the project ensures user information is protected. By incorporating a recommendation system and focusing on user accessibility, the project aims to deliver a seamless, efficient, and secure online shopping experience.

1418. LMS COURSE MANAGEMENT

Project Advisor	MR. M. FAHAD KHAN
Status	Complete

"LMS Course Management" revolutionizes education by tackling its inherent challenges through an innovative Learning Management System (LMS). This platform enhances accessibility, interactivity, and feedback mechanisms, benefiting educational organizations significantly. Students gain flexibility in accessing learning materials from diverse devices and locations, overcoming traditional barriers. The LMS is customizable to reflect the institution's branding and identity, fostering a professional environment aligned with its values. This customization enhances brand recognition and supports improved teaching methodologies, contributing to a cohesive educational experience.

1419. SIGN SENSE: ENABLING DEAF AND MUTE INTERACTION

Project Advisor	MR. MOHSIN SAMI
Status	Complete

"Enabling Deaf and Mute Interaction" is a pioneering software project addressing the communication challenges faced by the deaf and mute community. Traditional methods often fall short, leading to isolation. This project leverages advanced image processing, machine learning, and natural language processing to enable real-time sign language recognition and translation using readily available cameras on laptops and PCs. By converting sign language gestures into plain text and vice versa, the project facilitates seamless interactions in social, educational, and professional settings. This endeavor aims to bridge the communication gap, empowering the deaf and mute community, fostering inclusivity, empathy, and understanding, and creating a more connected society.

1420. WEAPON-YIELDING FACE DETECTION SYSTEM

Project Advisor	MR. MOHSIN SAMI
Status	Complete

The weapon-yielding face detection system is designed to identify individuals carrying weapons through image detection algorithms and machine learning techniques. It captures video or images of people's faces in real-time using CCTV cameras, which are then processed and analyzed to recognize patterns indicative of guns. Upon detecting a weapon, the system generates an alert or notification to security personnel or law enforcement, enabling a swift and appropriate response to potentially prevent harmful incidents or crimes. This system aims to enhance security measures in public places such as airports, stadiums, or government buildings, though it is essential to address false positives and strive for high accuracy.

1421. CODEFLOW

Project Advisor	MR. MOHSIN SAMI
Status	Complete

CodeFlow is an innovative web-based solution designed to address the challenges faced by novice programmers and students in understanding programming concepts. The project aims to bridge the gap between the abstract nature of code and the complexities of creating logical program flows. It provides an intuitive drag-and-drop interface for users to construct program code using flowchart elements. CodeFlow also offers an algorithm for converting flowcharts into textual code and existing code into flowcharts, enabling learners to grasp program logic. The platform includes step-by-step flowchart execution with memory map visualization, allowing students to observe data storage and manipulation. CodeFlow fosters creativity, engagement, and motivation among learners, offering valuable insights into computer memory management.

1422. MEETSKOOL

Project Advisor	MR. MOHSIN SAMI
Status	Complete

MeetSkool is an innovative educational app that connects students based on their specialized skills, fostering seamless peer-to-peer learning and collaborative study groups. It features integrated scheduling for online or in-person meetings and offers peer reviews and star ratings to gauge expertise levels. Skilled students can offer their services for purchase as they reach milestones. The app utilizes advanced NLP to adjust star ratings based on sentiment and efficiently manages shared expenses. MeetSkool cultivates a vibrant community of learners and mentors, providing a dynamic platform for skill development, collaboration, and personal growth, including a bill-splitting feature for restaurant and hostel expenses.

1423. TREKQUEST

Project Advisor	MR. OWAIS HAKEEM
Status	Complete

Outdoor enthusiasts and fitness adventurers often face challenges with existing outdoor adventure applications, such as tracking routes in areas with poor or no internet connectivity, live location sharing, and fitness monitoring and recommendations. Addressing these issues is crucial to enhancing

the overall outdoor adventure experience, ensuring safety, and maximizing the benefits of their activities. Therefore, there is a need for an application that offers offline tracking of routes in remote areas, live location sharing, and fitness monitoring with personalized recommendations based on the user's fitness level and preferences. By solving these problems, we can create an invaluable application for outdoor enthusiasts.

1424. SWIFTRESQ

Project Advisor	MR. OWAIS HAKEEM
Status	Complete

Women today face significant safety challenges, including harassment and violence, necessitating an effective solution that empowers them to ensure their safety and seek immediate assistance. Existing measures may be insufficient, leaving women feeling vulnerable. A comprehensive safety app is urgently needed, offering features like real-time tracking, distress signals, helpline access, discreet reporting, and community support. This app aims to empower women to navigate public spaces confidently, raise awareness, and facilitate prompt response systems, contributing to a safer society for women.

1425. BRAINIACS

Project Advisor	MR. OWAIS HAKEEM
Status	Complete

"Brainiacs" is a dynamic and innovative social platform designed to address student isolation across diverse study areas and universities. This project emphasizes creating a thriving online community that fosters knowledge sharing, collaboration, and academic support among students from varied academic backgrounds. Utilizing web and mobile technologies, data management, and cloud services, Brainiacs transforms how students connect and learn collectively. The anticipated outcomes include a comprehensive cross-university platform powered by advanced frontend and backend technologies, fostering a global network of knowledge seekers. Brainiacs aims to empower students and revolutionize higher education by uniting individuals through technology and human interaction, promoting academic enrichment and lasting connections.

1426. EDU METOR AI (TRANSFORMING THE NEW YOU)

Project Advisor	MR. OWAIS HAKEEM
Status	Complete

The Edu Mentor AI project revolutionizes online education by addressing the limitations of existing e-learning platforms and creating an engaging educational ecosystem. Utilizing state-of-the-art AI algorithms, inspired by the Fiverr marketplace model, Edu Mentor connects proficient tutors with eager learners. Its significance lies in personalizing and enhancing the remote education experience. The platform also provides a global stage for tutors to showcase their expertise, fostering a knowledge-sharing community. Encompassing artificial intelligence, machine learning, software engineering, web and mobile development, and database management, Edu Mentor promises a holistic solution for modern education. It aims to inspire and empower students, cultivating a culture of excellence and creating a positive learning community.

1427. BARGAINBAY

Project Advisor	MR. OWAIS HAKEEM
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Status	Complete
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The widespread adoption of online shopping is attracting vendors to e-commerce platforms, while technological advancements like machine learning offer new opportunities. However, fixed price tagging and choosing the appropriate product remain challenging. To bridge this gap, Bargain Bay offers a negotiable marketplace, enabling vendors to sell new and older products with price negotiation. This feature is especially beneficial in regions where buyers prefer bargaining. Bargain Bay reduces costs and enhances satisfaction by allowing price negotiation. The app uses advanced tech skills, making it user-friendly. Buyers can set a threshold price, negotiate if the price is higher, and place bids on products, making purchases once approved by sellers.

1428. ATTENTION BASED BODY MISALIGNMENT USING DEEP LEARNING TECHNIQUES

Project Advisor	MR. M. TAYYAB MIR
Status	Complete

Person re-identification (Re-ID) is vital in intelligent surveillance, recognizing individuals across cameras despite appearance changes. It's a challenging computer vision task with practical security applications. Our solution uses ResNet-50 convolutional blocks to boost network performance and representation power. Channel and Spatial Attention Modules aggregate channels, spatial dimensions, and positional awareness. Pose estimation models identify key body points, and normalization algorithms align them for consistent posture representation. Trained on datasets like DukeMTMC and Market-1501, our architecture aims to surpass state-of-the-art models, enhancing detection and classification accuracy.

1429. FABRIC FUSION

Project Advisor	DR. ANAM MUSTAQEEM
Status	Complete

Fabric Fusion is dedicated to tackling the complex operational challenges encountered by tailors in their daily business operations. Tailoring processes are widely recognized as intricate and error-prone, often causing delays and inefficiencies. There is a clear need for a digital solution that can streamline these operations, making them more efficient and less prone to errors. The Fabric Fusion system aims to address this gap by leveraging technology to automate and optimize various aspects of the tailoring process. By implementing this system, we aim to revolutionize how tailors manage their workflows, ensuring smoother operations, improved accuracy, and ultimately, enhanced customer satisfaction.

1430. VIVID ESTATE-YOUR PATH TO REAL RESIDENCE

Project Advisor	MS. SAIRA LATIF
Status	Complete

Our mobile app named Vivid Estate transforms property and hostel exploration, utilizing 360 virtual visit tours for immersive experiences. Sellers easily create interactive property tours via smartphones, while buyers gain in-depth property understanding. The app's features include 360 Virtual Visits, 2D Layouts, refined search filters, map integration, chat, and confidential bidding systems.

1431. HOME IMAGINE

Project Advisor	MR. M. TAYYAB MIR
Status	Complete

"Home Imagine" revolutionizes the Pakistani e-commerce landscape by offering a diverse array of home interior products, including furniture, decoration plants, and lighting solutions. Going beyond typical platforms, it introduces the unique "Freelancer GIG" function, connecting users with skilled interior designers for personalized design services. With a commitment to affordability, accessibility, and cultural relevance, the platform aims to be the go-to destination for those seeking quality and variety in home decor. By actively engaging local freelance designers, "Home Imagine" not only enhances user experiences but also contributes to the growth of the Pakistani design community. The platform's emphasis on security, compliance, and localized strategies ensures a tailored and trustworthy shopping environment, setting new standards in the e-commerce sector. "Home Imagine" envisions becoming a symbol of creativity, convenience, and excellence in the realm of home interior design.

1432. PARENTING VILLAGE: EMPOWERING AND GUIDING NEW PARENTS

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

In the dynamic world of parenting, the early years of a child's life hold a paramount significance, setting the foundation for their future. However, many parents encounter the challenge of navigating this intricate journey without accessible resources and guidance. "Parenting Village" emerges as a comprehensive web-based solution, poised to address this critical issue by integrating developmental psychology principles with cutting-edge technology.

1433. SAFE PAKISTAN FROM CRIMES

Project Advisor	MR. TAIMOOR HASSAN
Status	Complete

Pakistan is facing a rising crime rate, making people feel insecure about going out, whether day or night. Particularly at night, people tend to avoid leaving their homes. Our app aims to provide security for the people of Pakistan by offering various features to use in emergency situations. Users can send their location directly to the nearest police station and check if someone nearby needs help. They can also view top-rated police stations known for their services and read safety precautions. This web-based application enables users to send messages and locations directly to the nearest police station for assistance when they feel unsafe.

1434. RRIDE

Project Advisor	MR. TAIMOOR HASSAN
Status	Complete

The project aims to revolutionize urban transportation in Lahore by developing a mobile application for a city-wide rental bike system. This project addresses the problem of affordable and convenient transportation for groups by offering an economical and eco-friendly solution. Through a user-friendly app, privately owned bikes integrated into the system, secure payment methods, and innovative identity verification, the project aspires to provide a reliable and convenient mode of transportation that caters to the diverse needs of the city.

1435. QUANTUM CAR BITS

Project Advisor	MR. TAIMOOR HASSAN
Status	Complete

Quantum Car Bits is an online platform offering a wide range of car spare parts, user-friendly navigation, and a unique modification feature. Users can easily browse and purchase parts, and customize their vehicles by adding splitters, stickers, and more. Our dedicated support team is available from 9 am to 5 pm to assist customers with part selection and car-related issues promptly. We employ AI for a recommendation system and Machine Learning for image recognition, allowing users to find specific parts by uploading images.

1436. VOYAGE VISTA- HOME AWAY FROM HOME

Project Advisor	MR. TAIMOOR HASSAN
Status	Complete

"Voyage Vista" is an innovative online platform connecting travelers with a diverse range of unique accommodations worldwide, from traditional apartments to tree-houses and yurts. Each listing provides detailed information, high-resolution photos, and user reviews to help travelers make informed decisions. The platform empowers hosts with a user-friendly interface to list and manage their properties effectively. To ensure trust and safety, Voyage Vista has implemented a secure verification process, encourages guest reviews, and uses secure payment systems. Our goal is to make travel easy, fun, and accessible, fostering global connections and creating unforgettable experiences for all users.

1437. DATA SCIENCE TECHNIQUE BASED ECOMMERCE PLATFORM

Project Advisor	MR. TAIMOOR HASSAN
Status	Complete

The project aims to revolutionize e-commerce by developing an innovative platform that uses data science to enhance user experiences and streamline business operations. As online marketplaces grow, traditional e-commerce platforms struggle to meet evolving consumer expectations. This project addresses these challenges with dynamic features such as a cutting-edge recommendation system and a responsive pricing model that adapts to individual preferences and market fluctuations. By harnessing data science, the platform intends to offer personalized experiences and efficient business solutions, transforming the e-commerce landscape to better meet modern consumer demands.

1438. NFT MARKETPLACE WEB APPLICATION

Project Advisor	MR. WAQAS ALI
Status	Complete

The "NFT Shop" project addresses the challenges in current Non-Fungible Token (NFT) marketplaces, particularly usability and personalization issues. Users often struggle to find affordable NFTs and lack personalized content recommendations. Our project aims to create a revolutionary web application that redefines the NFT trading landscape by integrating cutting-edge technologies. This project will enhance user satisfaction, foster community engagement, and promote broader NFT adoption. It features an intuitive price filter, innovative NFT gifting capabilities, and an AI-driven recommendation system. The knowledge areas include blockchain technology, web development, AI, security protocols,

cryptocurrency dynamics, UX design, smart contracts, and community building. "NFT Shop" aspires to reshape the NFT trading experience, making it secure, accessible, and enjoyable.

1439. CREATING IMMERSIVE 3D IMAGE MODELS FOR ENHANCED COMMERCE APPLICATION

Project Advisor	MR. WAQAS ALI
Status	Complete

This project integrates cutting-edge 3D image modeling technology into an e-commerce platform tailored for the automotive industry. It aims to revolutionize online car sales by providing users with immersive, interactive, and detailed 3D representations of vehicles. By addressing the limitations of traditional two-dimensional images, the project enhances user engagement and decision-making in the car purchasing process. It draws upon knowledge areas like computer graphics, web development, mobile application design, database management, and UX design. The anticipated results include a user-friendly e-commerce website and mobile app with robust 3D modeling capabilities, measured by user feedback, engagement metrics, and car sales conversion rates, setting a new standard in online car sales.

1440. EMPOWERING STARTUPS: A COMMUNITY PLATFORM FOR GROWTH, MENTORSHIP, AND INVESTMENT

Project Advisor	MR. WAQAS ALI
Status	Complete

The "Empower Startups" community platform connects entrepreneurs, mentors, and investors to address the common challenge of securing capital for business ideas. Entrepreneurs often struggle to turn their ideas into successful ventures due to a lack of funding, despite gaining knowledge from mentorships. This platform offers a solution by providing a space where investors can connect with entrepreneurs. Key features include an investor directory, a bidding system for investment opportunities, and an "AI Presentations" feature for pitching ideas via video calls. By facilitating access to both mentorship and capital, Empower Startups aims to create a robust support system that guides entrepreneurs from concept to success.

1441. TRUTHGUARD: A RESEARCH PROJECT FOR FAKE NEWS DETECTION USING MACHINE LEARNING

Project Advisor	MR. WAQAS ALI
Status	Complete

In today's digital age, the spread of misinformation and fake news threatens informed decision-making, public discourse, and trust in media. Our research initiative tackles this issue by developing a machine learning model to identify fake news accurately. Using advanced natural language processing (NLP) techniques, we extract features and patterns from an extensive dataset of news stories from reputable and untrustworthy sources. We rigorously curate and preprocess these articles to ensure effective model training. Exploring various machine learning techniques, we focus on feature selection and evaluation metrics like precision and accuracy. Additionally, we aim to enhance our model's language capabilities by incorporating Urdu, addressing bias, and ensuring fairness. Our goal is to create a scalable fake news detection system, contributing to a more trustworthy media ecosystem.

1442. VIDEO SIMILARITY DETECTION SYSTEM

Project Advisor	MR. WAQAS ALI
Status	Complete

The Video Similarity Detection System identifies and compares video content to detect similarities, crucial for efficient content management, copyright protection, and organization in large video databases. Analyzing visual and auditory features, it accurately indexes and retrieves duplicate or related videos, supporting applications like detecting pirated content, organizing video libraries, and recommending similar videos. The system enhances video management efficiency, providing a reliable tool for effective content identification and management.

1443. CUSTOMPACK TRAVELS "AUTOMATED TRAVEL PACKAGES ON DEMAND)

Project Advisor	MS. AQDAS TANVIR
Status	Complete

"CustomPack Travels" is an online travel agency platform simplifying the travel planning experience for tourists. It tackles challenges of navigating extensive travel data and budget constraints by collecting detailed destination, hotel, meal, and weather information. Users input budget preferences and travel choices, and our system generates personalized vacation packages optimizing value within the specified budget. The project aims to streamline trip planning, offer a user-friendly interface, and align preferences with budgets to boost customer satisfaction and bookings in the online travel agency industry.

1444. UNIFIED DEEPFAKE DETECTION

Project Advisor	MS. AQDAS TANVIR
Status	Complete

Unified Deepfake Detection aims to create a comprehensive system to identify and mitigate the spread of deepfake content. This project addresses the growing concerns around manipulated media, which can have serious implications for misinformation, privacy violations, and public trust. By developing a unified platform, the project seeks to detect deepfake videos and images across various contexts, ensuring reliability and accuracy. The system will integrate multiple detection methods to enhance robustness and provide users with a trustworthy tool to verify media authenticity. The anticipated result is a user-friendly application that aids individuals, organizations, and platforms in safeguarding against the negative impacts of deepfake content.

1445. AI PAINTERLY PALACE

Project Advisor	MS. AQDAS TANVIR
Status	Complete

AI Painterly Palace is a groundbreaking e-commerce platform that addresses crucial aspects of online art and creative commerce. This project creates a dynamic marketplace where buyers and sellers can thrive. Our platform offers unique features, including a user-friendly and artist-focused marketplace, round-the-clock assistance through an advanced chatbot system, and a monthly bidding system to drive engagement. Additionally, it features an AI image generator to help users bring their artistic visions to life and an AI image restoration service for damaged artwork. The significance of this project lies in

revolutionizing how artists and art enthusiasts interact and transact online, fostering a thriving artistic expression and commerce ecosystem.

1446. QR CODE BASED ATTENDANCE AND AUTOMATED TEACHER FEEDBACK BASED LMS SYSTEM

Project Advisor	MS. HIRA ASIM
Status	Complete

Our project focuses on developing an LMS portal with QR code-based attendance and automated teacher feedback. We aim to address the challenges of traditional attendance systems and biased teacher feedback. Implementing QR code-based attendance will streamline the tracking process, while the automated feedback system will review responses to ensure fairness and constructiveness. This will benefit both teachers and students by providing valuable feedback. Utilizing web development, app development, and software engineering, our expected results include improved attendance management, efficient and unbiased feedback delivery, and an enhanced learning environment.

1447. BUILD SMART CHOICE

Project Advisor	MS. HIRA ASIM
Status	Complete

Build Smart Choice is a user-friendly AI-powered application that transforms the method of choosing materials for construction projects. Users must register to access the app. This advanced approach considers the user's area, budget, and floor preferences to give economical material recommendations, focusing on the best options within their means. The app provides layouts based on the selected house area and offers four packages, including lists of grey structure materials and finishing materials with their prices and quantities. Based on the user's budget, the system recommends construction materials. Users can download the recommended layouts with the premium version and provide feedback through the app.

1448. REAL-TIME PERSON RE-IDENTIFICATION SYSTEM

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	Complete

In computer vision, developing a robust person recognition system across cameras is essential for applications like security, smart cities, and safety. Achieving reliable recognition across varying stances, lighting conditions, and angles poses significant challenges. Our proposed solution leverages deep learning techniques tailored for practical deployment. Specifically, we employ deep convolutional neural networks (CNNs) trained on extensive datasets such as CUHK03, DukeMTMC-reID, and Market-1501. To enhance accuracy, we integrate methods like data standardization and augmentation. We rigorously validate our system in diverse and challenging environments using benchmark datasets. Applications include tracking customer behavior in retail, enhancing smart city infrastructure, and improving surveillance capabilities.

1449. NLPOWEREDDUB: NEXT-GEN AI DUBBING WITH DEEP LEARNING AND NATURAL LANGUAGE PROCESSING

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	Complete

Our project leverages advanced deep learning and natural language processing to enhance video viewing across languages. We aim to seamlessly dub videos, preserving speaker voices, emotions, and meaning. By creating synthetic voices that closely resemble originals, we improve the viewing experience, making it engaging and natural.

1450. DECENTRALIZED LOAN MANAGEMENT SYSTEM

Project Advisor	MS. MAHAM MEHER AWAN
Status	Complete

This project outlines the design, performance, safety, and security requirements for a Decentralized Loan Management System. Utilizing smart contracts on a blockchain, the system ensures consistency, low latency, fault tolerance, and efficient transaction processing. Key security measures include data encryption, robust authentication, and disaster recovery plans. The SRS emphasizes software quality attributes such as 99.9% uptime, flexibility, interoperability, maintainability, dependability, and user satisfaction. It references studies on decentralized finance and blockchain technology for loan management, providing a comprehensive guide for developers and stakeholders to create a secure, efficient, and user-friendly system.

1451. PHYSIOFIT

Project Advisor	MS. MAHAM MEHER AWAN
Status	Complete

PhysioFit is an advanced mobile application designed to offer personalized exercise tips and diagnostics for physiotherapy needs. With a user-centric approach, the app collects crucial information such as daily routine, BMI, age, occupation, health conditions, history of fractures, and any disabilities through interactive questions. Leveraging sophisticated AI algorithms, PhysioFit meticulously analyzes this data to deliver customized exercise recommendations and physiotherapy insights. The goal is to enhance overall well-being and optimize physical health by providing tailored solutions that adapt to individual needs and conditions.

1452. LOGISTICS DISPATCHER

Project Advisor	MS. MAHAM MEHER AWAN
Status	Complete

The "Logistics Dispatcher" project aims to address the challenges faced in manual logistics dispatching between cities. This proposal summarizes the problem, methodologies, and expected results. The project leverages blockchain technology to create an online platform for booking trucks, enhancing security through encrypted smart contracts converted into QR codes for driver and receiver verification, and providing real-time tracing. The primary objectives include developing the app, ensuring secure transactions, and optimizing logistics processes.

1453. UCP SERVICE PORTAL

Project Advisor	MS. MAHAM MEHER AWAN
Status	Complete

The UCP Service Portal is a centralized digital platform at the University of Central Providence, dedicated to optimizing the student experience. Through seamless integration of technology, it efficiently manages academic pursuits, extracurricular engagements, and community service <S25BS005>

initiatives. Key functionalities include meaningful volunteer opportunities, a robust lost and found system, streamlined communication through notifications, and comprehensive academic record management. The portal prioritizes user empowerment, transparency, and community responsibility, offering a holistic solution for students' diverse needs within a unified digital ecosystem.

1454. PAK AGRI MOBILE APP

Project Advisor	MS. MAHAM MEHER AWAN
Status	Complete

The project aims to create a Flutter-based e-commerce mobile app for iOS and Android, focusing on seed sales and real-time weather updates. It serves as a unified platform for buying seeds for gardening and agriculture, with integrated weather information for informed planting decisions. The app facilitates seamless browsing, selection, and purchase of seeds, emphasizing user convenience. Key components include mobile app development, e-commerce features, weather data integration, inventory management, and secure payment processing. Deliverables include an admin panel, the mobile app with payment integration, an efficient inventory system, and real-time weather updates.

1455. AGRIRENT

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Complete

The AgriRent project tackles the critical issue of access to affordable agricultural equipment for farmers, particularly small and medium-scale ones. Limited access to modern machinery hampers crop yields and increases manual labor, affecting livelihoods and food security. AgriRent aims to create an intuitive platform for affordable equipment rentals, boosting productivity and promoting economic growth. This project leverages expertise in agriculture, software development, market analysis, and stakeholder engagement. By enhancing digital inclusion in farming, AgriRent will provide a model for technology-driven solutions to agricultural challenges, supporting a more efficient and sustainable agricultural sector worldwide.

1456. TRUSTEDSERVICES

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Complete

Finding reliable home repair services is often daunting, with challenges including locating trustworthy providers, unclear pricing, complex booking procedures, inconsistent quality, and safety worries. These issues cause frustration for homeowners. The Trusted Services app seeks to address these by connecting users with verified service providers, ensuring transparency, safety, and quality in home services. It aims to revolutionize the industry by providing a user-friendly platform for seamless connections and reliable repairs.

1457. GARDENIA APPLICATION

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Complete

The project aims to develop a mobile application for plant enthusiasts, leveraging machine learning to detect plant diseases and foster a community-driven platform. Identifying and managing plant diseases is a persistent challenge. This project integrates image-based disease detection, community <S25BS005> SDP Phase I (RS) Page 444

engagement, and fertilizer information to address these issues. The mobile application will use machine learning algorithms to analyze plant images and detect potential diseases, providing actionable insights for effective care. Key knowledge areas include machine learning, computer vision, and mobile application development. Community features will enable users to share experiences, seek advice, and access fertilizer information, fostering informed decision-making and holistic plant care.

1458. FUTURISTIC ART - A PLATFORM FOR ARTISTIC EXPRESSION

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Complete

Futuristic art, blending traditional methods with new technology, faces significant challenges. This project aims to address these by understanding the issues and exploring how creativity and technology intersect. Drawing from art, tech, psychology, and culture, it seeks to integrate traditional art into the rapidly changing digital world. The goal is to provide artists with innovative ways to express ideas in this new era. By offering fresh insights and fostering creative thinking, the research aspires to transform how we perceive and engage with art, helping artists navigate and shape the future of artistic expression with confidence and ingenuity.

1459. PETBOOK

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	Complete

PetBook is a groundbreaking project addressing the pressing issue of pet adoption and care. The increasing number of abandoned and neglected pets poses a significant societal challenge, with millions of animals ending up in shelters each year. Simultaneously, pet owners struggle to find reliable information and resources. PetBook aims to bridge this gap by creating a comprehensive platform for pet adoption and responsible pet ownership. The project involves mobile app development, data management, and social networking to create an intuitive application and foster a supportive community. By encouraging adoption, offering educational resources, and promoting responsible pet ownership, PetBook seeks to improve the lives of pets and their owners.

1460. PERA-SPECTRA

Project Advisor	MS. RUBAB JAVAID
Status	Complete

As we know that paralysis patients needs 24/7 care and care-takers should be with them all the time so it would be very hectic for them to be alert all the time as they are humans too and they get tired/exhaust too so this is a need of hour of a monitoring system which generates alert in emergency situations and at the time of the meal or medication. This not only relieves care-taker burden but also improves patient's care. So it would be a best solution to give best care to patient's without any problem of burden and tension. Our project "PERA-SPECTRA" addresses the pressing need to enhance the care and well-being of paralyzed individuals while reducing the significant burden on their care-takers.

1461. SHAPE YOUR STYLE

Project Advisor	MS. RUBAB JAVAID
Status	Complete

The "SHAPE YOUR STYLE!" project introduces an AI-powered website to help individuals select hairstyles that complement their face shapes. This innovative solution addresses the lack of personalized hairstyling guidance and the inconvenience of long salon waiting times. By leveraging AI-driven facial recognition, deep learning, and computer vision, the website provides tailored hairstyle suggestions based on individual facial features. The project's goal is to boost personal confidence and enhance the salon experience by merging artistry with technology. The website will also feature a booking system for salon appointments, offering a comprehensive solution for users seeking hairstyling advice and efficient salon services.

1462. VISION FORGE

Project Advisor	MS. RUBAB JAVAID
Status	Complete

Vision Forge addresses the gap in career guidance by offering a user-friendly app for students navigating their career paths without dedicated counselors in schools and colleges. The app allows students to input their academic records and interests, generating personalized career suggestions using advanced machine learning. It provides insights into potential fields, courses, and educational opportunities, aiming to align academic backgrounds with career aspirations and offer alternative paths if necessary. Ultimately, Vision Forge aims to empower students to make informed decisions for a rewarding career journey.

1463. KNOWLEDGE EXCHANGE

Project Advisor	MS. RUBAB JAVAID
Status	Complete

Our application is a one-stop destination for all your educational needs. Whether you're a student looking for affordable textbooks or someone with textbooks to sell, our platform is the best choice. With the rising prices of academic textbooks, many people find it difficult to afford new ones. Our platform allows users to buy used textbooks at low prices, eliminating the need to ask others or buy expensive new books. You can browse and purchase a wide range of old and new course books at competitive prices. Additionally, you can sell your unused textbooks, turning them into cash. Our user-friendly interface connects buyers and sellers quickly. We also offer stationary, resource materials, and a feature for people to register and apply for teaching jobs, connecting tutors with students in need.

1464. THE EXPLORER

Project Advisor	MS. RUBAB JAVAID
Status	Complete

The proposed project aims to address common challenges faced by travelers, such as difficulty finding suitable places to eat, navigating unfamiliar locations, safety concerns, budget issues, weather disruptions, and communication problems with locals. The significance of this project lies in enhancing the overall travel experience. The mobile application, "The Explorer," focuses on providing personalized recommendations, offline maps, safety features, and creative content generation capabilities. The project will utilize artificial intelligence (AI) for personalized recommendations, machine learning (ML) for content generation, geographic information systems for offline maps and navigation, and robust security measures. Expected results include a significantly improved travel experience, reduced planning stress, and a cohesive platform for discovering, documenting, and sharing travel memories.

1465. B2BZZLE

Project Advisor	MR. AHMAD ARSLAN
Status	Complete

B2B interactions form the backbone of global economic activities, facilitating the flow of products and services across industries. Whether it's a manufacturer sourcing raw materials, a technology company partnering with a software provider, or a retailer stocking its shelves. B2BZZLE would provide business persons a platform for the interaction between businesses. The main purpose of the application is to help the business persons to easily buy and sell the products. A better knowledge of tools and technologies, being used by the businesses, would help them perform better. The role of businesses is to provide information about their products.

1466. HELPING HEARTS

Project Advisor	MR. AHSAN AZHAR
Status	Complete

The "Helping Hearts" project tackles the challenge of efficient aid distribution through a comprehensive donation application. This app connects donors with individuals in urgent need, leveraging a network of volunteers for swift, transparent, and authenticated aid delivery. Volunteers can identify those needing help and share their details, allowing direct contributions from donors. The app emphasizes transparency, providing donors with insights into their contributions' impact through progress tracking, volunteer authentication, and secure communication channels. Covering sectors like education, healthcare, job provisions, and shelter support, the project aims to create a more efficient, reliable, and impactful aid distribution system.

1467. RESCUEMATE

Project Advisor	MS. SAHER ZIA
Status	Complete

Rescue Mate is an innovative app providing swift access to emergency and non-emergency services. It addresses common challenges like delays in ambulance response and difficulties in locating blood donors during emergencies by offering features such as requesting ambulances and finding nearby blood donors easily. For non-emergency situations, it offers ambulance booking for hospital discharges, dialysis, radiation therapy, or outpatient surgery, ensuring reliable transportation and preventing missed treatments. Additionally, Rescue Mate simplifies the process of finding information about medical tests, including costs and nearby testing centers, making it easy for users to access relevant test details conveniently.

1468. E-WILDXCHANGE+

Project Advisor	MS. SAHER ZIA
Status	Complete

E-wildXchange+ addresses challenges in animal breeding through an innovative online platform. The project aims to enhance genetic diversity, foster collaboration among breeders, and improve breeding outcomes. The significance lies in creating a comprehensive solution for diverse animals, including pets, reptiles, birds, and fish. The project utilizes knowledge areas such as frontend and backend development, database management, and .NET framework. The expected results include a user-

friendly interface, improved breeding practices, and a thriving community. E-wildXchange+ strives to be a one-stop solution, offering not just breeding support but also aiding in emergencies and providing access to special animal food, making it unique in Pakistan.

1469. WHESMA

Project Advisor	MS. SAHER ZIA
Status	Complete

Introducing Mobile Application WhEsMa, designed to address rental, buying, and selling challenges. It features six main sections: house buying/selling, car buying/selling, shop buying/selling, house rental, car rental, and shop rental. Key features include real-time tracking for rental cars, pre-scheduling for car rentals with return timers and fare recalculations, and live responses for car/house rentals. Users can submit preferences and receive contact and pricing from local sellers. WhEsMa also supports rating and feedback to prevent fraud and includes car verification through the excise website. Additionally, in-app conversations between buyers and sellers facilitate seamless communication.

1470. CHAMPENG

Project Advisor	MS. SAHER ZIA
Status	Complete

ChampEng is a mobile app designed to enhance English language skills in schoolchildren through engaging experiences. It features two modules: self-assessment and competition. In the self-assessment module, students answer randomly selected pictorial questions on prepositions, vowels, and vocabulary, receiving immediate feedback. The competition module allows two students to compete head-to-head, earning points for motivation. ChampEng also includes a word scramble game to expand vocabulary and test memory, fostering intellectual growth and confidence. The project leverages expertise in mobile app development, software project management, system design, and software architecture.

1471. BOLI ONLINE

Project Advisor	MS. SAHER ZIA
Status	Complete

Our innovative platform addresses the dilemma of online transactions by introducing a transparent auction and barter system, empowering users to buy and sell with confidence. The auction system allows users to add auctions, place bids, and set buyout prices, while the barter system facilitates the exchange of goods without currency. This project aims to transform the conventional buying and selling experience by eliminating pricing ambiguity, leveraging expertise in e-commerce, auction theory, UX design, and database management. By creating a user-friendly platform, we ensure fairness and transparency in transactions. The expected outcome is a reliable online environment that enhances user satisfaction and promotes community interaction through fair and confident transactions.

1472. DEVCONNECT: EMPOWERING DEVELOPERS NETWORK (THROUGH AI)

Project Advisor	MS. SAIRA LATIF
Status	Complete

"DevConnect" is a platform designed to address the challenges developers face in their daily pursuits. This comprehensive solution fosters collaboration, learning, and professional growth within the <S25BS005> SDP Phase I (RS) Page 448

developer community. DevConnect resolves issues of personalized assistance, fragmented learning resources, and limited networking opportunities. By leveraging machine learning, web development, and database management, it offers an environment where developers can connect with peers, seek guidance, showcase skills, and discover tailored learning resources. The platform uses content recommendation algorithms to align with users' interests and needs. DevConnect aims to bridge the gap between novice and experienced developers, promoting skill development and career advancement for all.

1473. ADITORY

Project Advisor	MS. SAIRA LATIF
Status	Complete

ADITORY is a comprehensive educational platform designed to enhance auditory learning experiences. This project aims to support students who benefit from auditory learning methods by providing a diverse range of audio-based educational content. ADITORY offers features such as recorded lectures, audiobooks, podcasts, and interactive listening exercises, all accessible through a user-friendly interface. The platform also includes tools for creating personalized study playlists, tracking progress, and engaging in collaborative listening sessions with peers. By catering to different learning styles and promoting auditory learning, ADITORY seeks to improve academic outcomes and make education more inclusive and accessible for all students.

1474. BOTANY BREEZE

Project Advisor	MS. SAIRA LATIF
Status	Complete

Botany Breeze is a vibrant and educational online platform dedicated to all aspects of plants and botany. With a deep-seated passion for greenery and a steadfast commitment to fostering environmental awareness, Botany Breeze serves as a thriving digital oasis for plant enthusiasts, gardeners, students, researchers, and nature lovers alike.

1475. MOBILE CAR MAINTENANCE AND PETROL SERVICE

Project Advisor	MS. SARAH JAVAID
Status	Complete

The "Mobile Car Maintenance and Patrol Service" project is a groundbreaking web-based platform designed to address significant challenges in modern vehicle ownership and travel. It aims to revolutionize traditional vehicle maintenance and rental services, introducing a seamless, on-demand system prioritizing convenience, safety, and profitability for both vehicle owners and travelers. The platform addresses inefficiencies in vehicle maintenance, limited rental access, underutilized assets, challenges for independent mechanics, and security concerns during rentals. It will leverage knowledge areas from a BSCS degree, including software engineering, database management, web development, networking, cybersecurity, UX design, and project management. The expected outcome is a comprehensive platform offering on-demand car maintenance and rental services, enhancing user experience and operational efficiency.

1476. PAPERHUB.PK

Project Advisor	MS. SARAH JAVAID
Status	Complete

Paperhub.pk is an innovative e-commerce platform in Pakistan specializing in high-quality paper products. It offers a diverse range of goods, ensuring a seamless shopping experience for buyers and empowering sellers with personalized dashboards. Embracing sustainability, it features a "Production House Panel" for customizable items and a "Sell Your Old and Wasted Paper" feature to promote recycling. The platform ensures trust with a reliable ratings system and dedicated admin support, prioritizing convenience, quality, and innovation. Paperhub.pk aims to be the top choice for paper enthusiasts, promoting eco-consciousness and efficient commerce.

1477. FLYAIR360-ULTIMATE AVIATION PORTAL FOR PAKISTAN

Project Advisor	MS. SARAH JAVAID
Status	Complete

The "FlyAir360 - Ultimate Aviation Portal for Pakistan" project aims to improve Lahore airport services by addressing critical issues like inadequate airport information, lost baggage instances, and operational inefficiencies. Through a comprehensive web-based aviation portal, FlyAir360 will offer real-time flight data, smart baggage tracking, and a user-friendly airport guide. This initiative seeks to enhance the airport experience, minimize baggage-related problems, and optimize airport operations. It leverages expertise in web development, data integration, real-time data feeds, and user interface design to achieve these goals, ultimately enhancing the passenger experience and advancing the aviation sector in Pakistan.

1478. STYLE VIBE: FASHION FUSION WITH MOOD, WEATHER AND YOUR WARDROBE

Project Advisor	MS. ZUPASH AWAIS
Status	Complete

Style Vibe is an innovative web-based platform that combines Machine Learning, real-time weather data, and occasion-based styling to provide users with personalized clothing and accessory recommendations. Users can create fashion profiles and receive climate-appropriate outfit suggestions, even connecting with popular clothing brands for a wider selection. Additionally, the platform fosters a community where users can share outfits, seek advice, and stay updated on fashion trends. Style Vibe empowers individuals to express their personal style confidently and offers a responsive and enjoyable user experience.

1479. SPACE ELEVATOR

Project Advisor	MS. ZUPASH AWAIS
Status	Complete

SPACE ELEVATOR is an ambitious project aimed at revolutionizing space travel and transportation. The concept involves constructing a vertically extended structure that reaches from Earth's surface into space, enabling efficient and cost-effective movement of materials and passengers. This innovative solution addresses the high costs and risks associated with traditional rocket launches, offering a safer and more sustainable alternative. The project explores the feasibility of building a robust and resilient elevator system capable of withstanding the immense pressures and environmental conditions encountered in space. By advancing this cutting-edge technology, SPACE ELEVATOR aims to significantly enhance access to space, paving the way for future exploration, scientific research, and commercial ventures.

1480. CHILDREN AND ADULTS VACCINATION AWARENESS

Project Advisor	MS. ZUPASH AWAIS
Status	Complete

CAVAS, the Children and Adults Vaccination Awareness System, is a revolutionary web-based application addressing challenges in vaccination awareness and tracking. It simplifies the complex landscape of vaccination by educating users, streamlining scheduling, and introducing innovative features like direct appointments. CAVAS aims to empower individuals of all ages, promoting informed decision-making and proactive healthcare management. Its user-friendly interface and robust data management contribute to enhancing vaccination rates and awareness. Additionally, CAVAS offers direct appointments and online consultations, allowing users to schedule telemedicine appointments with healthcare professionals for personalized advice on vaccination schedules and disease details, ensuring comprehensive vaccine coverage from the comfort of their homes.

1481. PRESERVING PAKISTAN'S HERITAGE: EMPOWERING LOCAL ARTISANS AND CELEBRATING CULTURAL TRADITIONS

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	Complete

Our proposed Final Year Project (FYP) aims to develop a platform dedicated to preserving and celebrating the rich cultural heritage of Pakistan. This interactive space will empower local artisans and craftsmen to showcase their traditional products while fostering awareness and appreciation for the cultural significance of these heritage items among local and global audiences. The platform will serve as an online marketplace for artisans to display and sell their crafts, raise cultural awareness, and foster a sense of pride and identity within the community. By supporting heritage-based industries, the project seeks to encourage sustainable cultural tourism and economic growth, establishing a reliable platform that positively impacts artisans and contributes to Pakistan's cultural preservation.

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1482. MAP MY HOUSE

Project Advisor	DR. ADNAN GHAFOOR
Status	In Process of Completion

Our project aims to develop a user-friendly website that generates customized house maps based on user inputs like dimensions, directions, and measurements. The site will offer best-fit layout options, detailed room measurements (including doors and windows). This platform addresses the inefficiencies and inaccuracies of traditional house mapping, making planning easier for homeowners, designers, and builders. By understanding user requirements and technical limitations, we will create a framework for easy layout generation, select appropriate technologies, and conduct usability testing. Our goal is to streamline the house mapping process, improve user satisfaction, ensure accuracy, and simplify house layout planning. The project ultimately aims to save time and money, increase the user base, and receive positive feedback by offering a more efficient and cost-effective solution for house mapping.

1483. ECO BROWSER

Project Advisor	DR. MUZAMMIL HUSSAIN
Status	In Process of Completion

This project addresses the pervasive issue of inefficient web browsing on low-resource Android devices, where mainstream web browsers consume excessive battery power, RAM, and lack effective caching mechanisms. The aim is to develop an Android mobile application that revolutionizes the browsing experience for users of such devices. Leveraging memory-efficient algorithms, optimized caching systems, and power-efficient strategies, this project seeks to create a space-effective and user-friendly browsing solution.

The significance of this project lies in its potential to provide a superior browsing experience for a vast user base, making web access more accessible and sustainable. Key knowledge areas involved include mobile application development, algorithm implementation, user interface design, and power efficiency considerations. The anticipated results include a mobile app that efficiently addresses the challenges of low-resource devices, contributing to a more inclusive digital landscape.

1484. AUTOHUB360

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

Auto Hub 360 is designed to provide a user-friendly platform for buyers to search and buy products from multiple vendors. This platform will offer users the ability to explore a wide range of products and parts sourced from different vendors. Our website facilitates efficient and competitive purchasing. Additionally, our system will contain a bidding process to empower users with the opportunity to secure the best deals through convertible and vital market place. Our project aims to create a user-friendly platform that makes it easier for buyers to find products, interact with different vendors easily. We will use web scrapping technology to gather information of different products from different website .We will also have a search features that allow buyers to compare vendors easily based on price ,availability and product details .We will also have a bidding feature that enable users to participate actively in price negotiations, promote a competitive environment that benefits both buyers and vendors .The purpose of our project is combining advanced technologies simplifying the product search process, improving vendor interactions and adding a new way for buyers to purchase items through bidding. We will use advanced technology to gather product data and present it in a way that is easy to understand.

1485. FLY PACKR

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

The problem addressed by Fly Packr is the inefficiency and high cost associated with traditional shipping methods, particularly for sending items domestically or internationally. Traditional courier services often impose expensive fees, limited delivery options, and rigid schedules, which inconvenience both travelers and senders. Moreover, finding someone trustworthy to send items with or communicating across language barriers further complicates the process. Fly Packr's significance lies in its innovative solution: connecting travelers who have unused luggage space with individuals needing to send items, thereby offering a more economical, flexible, and environmentally friendly alternative. By utilizing travelers' existing journeys, Fly Packr not only reduces costs and expands delivery options but also enhances convenience and trustworthiness in shipping transactions, ultimately transforming the logistics landscape for the benefit of all participants.

This knowledge areas that this system covers are Python, Django, Hyper Text Markup Language (HTML), Cascading Style Sheets(CSS) and Structured Query Language.

With its comprehensive features, fly packr is expected to simplify the fastest items delivery in a secure way. It will provide a one-stop solution for all those who want to ship their items from overseas and <S25BS005>

domestically in less time and in an efficient way. The platform is also expected to provide smooth and best experience between traveler and customer by keeping in touch during shipment to their landing place. The customer will be notified during every stage of shipment.

1486. CODEMAP360

Project Advisor	DR. IMRAN ARSHAD CH.
Status	In Process of Completion

CODEMAP360 project addresses the challenge of understanding complex code structures in largescale software development. This desktop application leverages AI APIs to generate dynamic function definitions, providing developers with concise code summaries to improve comprehension and efficiency. The application aims to facilitate smoother team transitions, enhance project maintainability, and accelerate development cycles by simplifying codebase comprehension.

1487. CLIPGENIE AI

Project Advisor	DR. IMRAN ARSHAD CH.
Status	In Process of Completion

This project proposes the development of an innovative automated video editing tool that utilizes advanced Natural Language Processing (NLP) techniques. By leveraging the power of NLP, particularly in the areas of topic modeling and speech-to-text conversion, this tool is designed to significantly streamline the video editing process. Its primary goal is to transform lengthy, long-form videos into shorter, more engaging segments that are tailored to specific topics identified within the content or based on keywords provided by the user. The platform is also set to feature chapter-making capabilities, which will automatically generate timestamps. This functionality aims to enhance the organization and navigability of video content, making it easier for viewers to locate and engage with specific sections of interest. By automating these processes, the tool not only saves time for content creators but also improves the overall viewing experience for the audience, ensuring that videos are both compelling and easy to navigate.

1488. VIRTUAL PERSONAL SHOPPER

Project Advisor	DR. IMRAN ARSHAD CH.
Status	In Process of Completion

The Virtual Personal Shopper project aims to revolutionize online shopping by providing users with a centralized platform to streamline their shopping experience. Leveraging advanced web scraping techniques, the platform aggregates product information from various websites, enabling the Virtual Personal Shopper to compare prices, reviews, and availability on behalf of the users.

Key features include a recommendation system that tailors product suggestions based on user preferences and browsing history. Additionally, real-time notifications for product availability and discounts are provided to users. Utilizing technologies like Flutter, Laravel, and Python libraries, the project integrates web and app development to deliver a seamless user experience.

In summary, Virtual Personal Shopper simplifies online shopping by centralizing product discovery, comparison, and analysis, ultimately saving users time and effort while enhancing their overall shopping experience.

1489. FINAL YEAR PHOENIX

Project Advisor	DR. MOHSIN ASHRAF
Status	In Process of Completion

It can be difficult for final-year students to confirm that their final-year project ideas are original. The tools they have now cannot compare their ideas to a giant database of past completed projects. This means students might waste time working on something someone already did, which slows everyone down and limits creativity. The Final Year Phoenix project is a meaningful change. It helps students check if their ideas are innovative. Students sometimes end up doing projects that have already been done before. It is important because it means students can show off their own creativity and make a real impact with their final projects. The knowledge areas that this system covers are Natural Language Processing, Machine Learning, Semantic Analysis, Information Retrieval and Web Development. The Final Year Phoenix will provide a web platform to help students check if their project ideas are original. By semantically matching the content of their ideas with existing projects, it will ensure uniqueness, guiding students to develop innovative final projects.

1490. ONLINE WEB PORTAL DEEPCODEX DETECTION USING DEEP LEARNING

Project Advisor	DR. MUZAMMIL HUSSAIN
Status	In Process of Completion

The proliferation of Artificial Intelligence (AI) has revolutionized technological usage, enabling the development of applications with minimal power and resource requirements. Among these innovations is Deepfakes, a technology capable of convincingly altering videos and images, presenting profound implications for privacy, security, and societal stability. The manipulation of visual content by Deepfakes poses significant challenges, exacerbated by the complexity of detecting such alterations due to advanced AI techniques like Generative Adversarial Networks (GANs). Addressing this challenge, our research introduces a method to identify fake faces within images and videos. Our approach begins with the identification of faces in visual media, followed by the extraction of intricate facial features using the sophisticated Deep Learning model, DenseNet-169. Subsequently, these extracted features are subjected to classification using Support Vector Machine (SVM) algorithms to discern between genuine and manipulated content. Through comprehensive comparative analyses, we have determined that the combination of DenseNet-169 and SVM offers the most effective solution for detecting fake faces. In pursuit of broader accessibility and usability, we intend to develop a user-friendly web application utilizing Django, offering an intuitive interface to empower individuals in verifying the authenticity of visual content. By bridging the gap between cutting-edge research and practical implementation, our Endeavor aims to mitigate the risks associated with Deepfake technology and foster informed engagement with digital media.

1491. KHALQ: PERSONALIZED HOSPITAL RECOMMENDER

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

In the healthcare industry, patients often face challenges in selecting the most suitable hospital for their specific medical needs. This decision-making process can be overwhelming due to the vast number of hospitals available and the varying specializations they offer. Additionally, patients may not be aware of the necessary medical tests required for their symptoms, leading to delays in diagnosis and treatment. Our project offers a solution to these issues through a user-friendly cross-platform interface. Users can enter their symptoms and location, and our program, powered by machine learning algorithms, will recommend a hospital that aligns with their symptoms and geographical location. It also suggests relevant medical tests, providing users with a more informed and efficient healthcare experience. This approach aims to alleviate the stress of hospital selection and improve patient outcome.

1492. EXAM EMPOWER

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Board exam preparation website is an online platform designed to help students prepare for their upcoming board examinations. These websites typically offer a range of resources and tools to aid students in their study efforts, including:

Comprehensive notes, textbooks, and reference materials covering all subjects included in the board exam syllabus.

Sets of practice questions and previous years' exam papers to help students familiarize themselves with the exam format and test their knowledge.

Full-length mock tests simulating the actual board exams to assess students' preparedness and identify areas for improvement.

Discussion forums, live Q&A sessions, and chat support to facilitate peer-to-peer learning and clarify doubts.

This web application will consist of two modules

1. Question bank
2. Question paper generator

1493. MODEL UNITED NATION MOBILE APP

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

A Model United Nations prep Mobile Application will help students in preparing for their competitions and will help them understand the topics and agendas of different domains. Such an app has never been constructed before, and as we are a part of the model un circuit of Pakistan we wish to make this operational in Pakistan at least.

1494. UTILIZING MACHINE LEARNING TECHNIQUES FOR ACCURATE LIVER DISEASE DIAGNOSIS

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Liver disease diagnosis is a complex challenge that requires timely and accurate identification for effective treatment. This project leverages machine learning techniques to develop a cutting-edge diagnostic model, revolutionizing the detection of liver diseases. By harnessing the potential of machine learning algorithms and collaborating with medical experts, we aim to create a precise and reliable tool for healthcare professionals. Our innovative approach tackles the complexities of liver disease diagnosis, ensuring data privacy, fairness, and transparency. This groundbreaking research paves the way for improved patient outcomes, enhanced medical decision-making, and a healthier future.

1495. VEHICLEVISTA

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Finding best car inspector is one of the biggest problem now a days. There are some companies who offers this service like Pakwheels, Cartest, Fixmycar, etc but their targeting audience is limited because they are serving in specific areas. Secondly, they have their own team. They only send their certified team for inspection purposes that's why sometimes they took a lot of time to come. VehicleVista is the application where customer and car inspectors are on one platform. We are connecting users to their respective inspectors that is close to their location. User can choose best inspector according to their ratings, distance, experience level etc. We hire only high skilled and certified inspectors for our customers. Our app is secure, safe and reliable for all users who want inspections of their own choice.

1496. SMARTHIRE

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

"Smart Hire" is an Applicant Screening Tool that addresses the challenges inherent in the hiring process. Traditional methods often struggle to identify the best candidates, leading to inefficiencies and mismatches between job openings and applicants. Nowadays, recruiters widely embrace the use of software like ATS to screen candidates, which is considered unbiased.

In this scenario, our method provides a deeper approach, integrating automated tests and an AI Matching Engine to screen applicants effectively. The system evaluates candidates' abilities, competencies, and character attributes, matching them with roles that suit their skills and character traits. By precisely aligning the evaluation with essential job requirements, this technology generates comprehensive feedback reports for recruiters. These reports aid in the finalization of the selection process by ranking applicants and recommending the top candidate.

Companies benefit from more efficient hiring procedures and improved candidate screening, while candidates experience a more transparent and enlightening employment process. Ultimately, "Smart Hire" introduces an advanced approach to recruiting by offering an unbiased, data-driven method of evaluation.

1497. AGROMARKETHUB: A DIGITAL PLATFORM CONNECTING FARMERS, CONSUMERS AND SUPPLIERS FOR SUSTAINABLE AGRICULTURAL GROWTH AND SUCCESS

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

AgroMarketHub is an innovative agricultural project dedicated to transforming agricultural trade in Pakistan by addressing the longstanding challenges faced by farmers, and consumers. The project responds to the critical need for a centralized marketplace that enhances market access, promotes price transparency, and streamlines transactions in the agricultural supply chain. By integrating cutting-edge technology such as **real-time communication, online bidding, and community forums**, AgroMarketHub aims to empower farmers, improve market efficiency, and foster sustainability. Drawing from expertise in agricultural economics, technology integration, and stakeholder engagement, the project seeks to deliver tangible benefits to all stakeholders involved. Knowledge areas utilized in the project include agile project management principles, user-centric design, technology integration, and stakeholder engagement. Agile methodology guides iterative progress through short sprints, continuous feedback loops, and rapid prototyping. By organizing tasks into manageable units and fostering collaboration among cross-functional teams, the project ensures flexibility and responsiveness to evolving requirements. The expected outcomes include increased market access for farmers, improved price realization, and enhanced transparency within the agricultural sector. Ultimately, AgroMarketHub endeavors to drive positive change, economic growth, and connectivity among farmers, and consumers in Pakistan's agricultural economy.

1498. WHISPR: END-TO-END WEB MESSENGER

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

Whispr is a web messenger that prioritizes user privacy by utilizing End-to-End Encryption (E2EE). Data security and user identity concerns are critical in today's digital era. Whispr addresses these concerns by offering features that allow users to control their communication and maintain anonymity. Traditional web messengers often raise privacy concerns due to potential data breaches, server-side storage of messages, and lack of anonymity options. Users have limited control over their data and may be vulnerable to surveillance or targeted advertising. Considering the growing importance of online communication, platforms that prioritize user privacy are essential. Whispr leverages advancements in cryptography to implement E2EE encryption, ensuring that messages are only decipherable by the intended recipients. Additionally, the project draws upon knowledge of secure communication protocols, user interface design, and web development methodologies.

1499. RIDERS REVOLUTION: THE ULTIMATE RIDE EXPERIENCE MARKETPLACE

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

Riders Revolution is an innovative online bike marketplace software aimed at addressing the fragmented nature of existing platforms and revolutionizing the biking experience for enthusiasts worldwide. The project focuses on solving the challenges faced by riders in navigating disjointed platforms for buying, selling, maintenance, customization, and community engagement. By integrating essential features such as dynamic bidding, AI-driven assistance, and comprehensive service offerings, Riders Revolution seeks to provide a unified platform that empowers riders and inspires a new era of biking characterized by seamless transactions, personalized experiences, and vibrant community connections. Through this project, knowledge areas including software development, user experience design, AI integration, and backend infrastructure will be leveraged. The expected results include a cohesive platform that enhances the overall biking experience, fosters community engagement, and delivers tangible value to users globally.

1500. AURUMWAVE: STREAMLINING GOLD TRADING THROUGH E-COMMERCE AND SMART DESIGN RECOMMENDATION

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

The proposal provides a user-focused, Pakistan-specific e-commerce solution. Online gold sales will be the platform's focus. This project addresses customers' most significant trust and credibility problems in the online gold purchase sector. With AI recommendation algorithms for engine development, Django for back-end development, and React JS for front-end development, the platform will provide sophisticated customer trust. AI for Gold Product Design Recommendation is a crucial feature. A more fluid and adaptable infrastructure that can handle future development and changes in business practices, and a better user experience.

1501. SHADOWS UNVEILED: ETHAN'S REDEMPTION

Project Advisor	MR. ASIM RAZA
Status	In Process of Completion

This project, titled '**Shadows Unveiled: Ethan's Redemption**', is a 3D episodic adventure single-player game aiming to provide an immersive experience for players through its unique storyline. The proposed game offers dynamic first- and third-person perspectives alongside AI-controlled enemies such as ghosts, Spartans, and four different bosses using an arsenal of weapons and special abilities. Our project aims to deliver a gaming experience that captivates players with its compelling narrative and challenges them to make strategic decisions. The objective of the game is to stay alive while facing lots of enemies wandering around the level. As the main character, players assume the role of a courageous mother on a mission to rescue her abducted child. Throughout the game, she navigates through a series of challenges and employing an arsenal of weapons to overcome obstacles and save her child. Our proposed methodology encompasses a structured approach, including story development, logic design, character creation, backend development, and graphical design. The anticipated results of "Shadows Unveiled" extend beyond player growth to societal impact. By encouraging players to reflect on their choices and consider the consequences of their actions, the game aims to foster critical thinking, problem-solving, emotional intelligence, and ethical behavior. These skills and values have the potential to positively influence player's real-life decision-making and interpersonal relationships. In conclusion, Ethan's Redemption elevates storytelling in games by blending suspense, challenges, and action. Using Unreal Engine and inspiration from top games, it creates an immersive world. The goal is to craft a memorable experience for players. The game promises an unforgettable journey of fear and excitement, leaving a lasting impact.

1502. PEIRCEAN TRIADIC ML TOOLKIT

Project Advisor	MR. ASIM RAZA
Status	In Process of Completion

Current machine learning struggles with isolated data and limited knowledge due to the close-world assumption. Open-world learning addresses some issues, but remains binary. This project proposes a Peircean Triadic Machine Learning Toolkit inspired by trichotomic philosophy. It will explore triadic algorithms for supervised learning tasks and compare them to classical and open world approaches. The expected outcome is a software GUI plugin supporting these algorithms, potentially leading to a new framework for open-world machine learning.

1503. WELLNESSWISE: AI INTEGRATED ALL-ROUNDED WELLNESS HUB

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

WellnessWise is an Android application that uses artificial intelligence (AI) to create personalized fitness plans, nutritional advice, and track progress. People today struggle to maintain good health due to busy schedules and a lack of personalized guidance. Existing fitness and nutrition apps offer plans that fail to consider individual needs and preferences, making it difficult to achieve health goals. Our application will use Machine learning algorithms to analyze fitness level, goals, and preferences to design custom workout routines. AI generates personalized meal plans based on your dietary needs and taste. The app will also track user's activity levels to assess fitness progress. This will benefit the users to achieve their fitness goals with personalized plans, Eat healthier with custom meal recommendations, and stay motivated with a supportive community and progress-tracking tools.

1504. GLOBE CHAT

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

Globe chat is a mobile app designed to break down language barriers in global communication, particularly for individuals with limited education. It leverages advanced Machine Learning (ML) and Natural Language Processing (NLP) to offer features like real-time multilingual chat, voice-to-text translation, and location-based language suggestions. By integrating these technologies with a userfriendly interface, Globe Chat aims to enhance communication and collaboration across different languages, promoting inclusivity and accessibility in an increasingly interconnected world.

1505. CUSTOM KICKS

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

1506. PSX STOCK ANALYSIS

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The "PSX Stocks' Analysis" project aims to address key challenges faced by investors in the Pakistan Stock Exchange (PSX) through advanced deep learning and data analysis techniques. The project focuses on three main objectives: predictive modeling, risk assessment, and portfolio visualization. By leveraging historical PSX data, we will develop deep learning models to accurately predict stock price movements, quantify risks associated with individual stocks and the overall market, and optimize portfolios for a balanced risk-return profile. The significance of this project lies in enhancing investor decision-making by providing actionable insights and effective visualization tools. The outcome will be a comprehensive web application featuring predictive models, risk assessment tools, and interactive visualizations, thereby bridging traditional financial analysis with data-driven approaches. This work will contribute to the fields of machine learning, data science, financial analysis, and web development, providing practical solutions for navigating the complexities of the PSX.

1507. PAKTOURBUDDY

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The problem lies in the absence of a localized and comprehensive tour management system tailored for Pakistani travelers. Existing platforms fail to address the unique needs of this demographic, resulting in challenges related to transparency, affordability, and accessibility.

This problem matters because many travelers aren't happy with the websites available. They can't find the information they need, and sometimes they end up paying too much. By fixing this, we can make travelers happier and help the tourism industry in Pakistan grow.

We'll use different skills to make our website. We'll need to know about making websites (HTML, CSS, JavaScript), using computers to make smart choices (AI), and managing information (databases like MySQL). We'll also use marketing skills to tell people about our website, like using social media and making partnerships.

1508. SMARTSTEPS: LEARNING ADVENTURES

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

Introducing SmartSteps, a game-changing app set to revolutionize how children interact with screens. It's crafted with the aim of turning passive screen time into a meaningful educational journey. SmartSteps recognizes that kids love their gadgets, so why not make that time count? It's all about making early education both engaging and purposeful, ensuring that children not only learn but also have fun while doing so. With SmartSteps, kids dive into interactive modules covering various subjects like math, language arts, and science, all while playing games and solving puzzles. Parents can track their child's progress and engagement, and the app's colorful and easy-to-use interface makes it a breeze for kids to navigate. SmartSteps isn't just another app; it's a tool that fosters a love for learning from an early age, making screen time truly valuable.

1509. EMPOWERING FREELANCERS THROUGH AN INNOVATIVE WEB APPLICATION

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The abstract for the proposed web application, "Empowering Freelancers," encapsulates the multifaceted challenges faced by freelancers in managing projects, maintaining work-life balance, and securing new opportunities. It addresses the problem of juggling multiple projects while actively seeking new gigs through a sophisticated web platform integrated with popular freelance platforms. Key features include an advanced notification system for early access to job opportunities aligned with individual skills, AI-driven proposal crafting assistance, and a database for portfolio enhancement. The project aims to increase job success rates, save time in proposal creation, and improve work-life balance for freelancers. This will be achieved through early job visibility, efficient proposal creation, and streamlined task automation, ultimately empowering freelancers to thrive in their competitive work environment.

1510. TRADE AN IDEA

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

Our project aims to create a platform that supports the creativity of the programming community while aligning with the Sustainable Development Goals (SDGs). We offer a website and mobile application where users can present and create new ideas that are beneficial to the environment and society and have business potential. Large language models (LLMs) were used to check consistency to ensure novelty of ideas, and ideas that were more than 70% similar to existing ideas were rejected yes. Additionally, the NLP model will analyze the consistency of these ideas with security goals.

The importance of the project is to fill the gap between concept design and concept implementation and to support the development of technology to solve global problems such as climate change, poverty and inequality. Core skills include software engineering, natural language processing, web and mobile development, and security. The intended result is a unified platform that allows programmers to create effective solutions that enable positive change and promote sustainability.

1511. POLYGRAPH TEST

Project Advisor	MR. FARAZ ALI
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Status	In Process of Completion
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A polygraph (lie detector) is a combination of both hardware and software that measures and records physiological changes in blood pressure, pulse, respiration, and skin conductivity. At the same time, the subject answers a series of questions, in the belief that deceptive answers will produce physiological responses that can be differentiated from those associated with non-deceptive answers. This test addresses the challenge of truth verification in sensitive situations such as criminal investigations or security screenings. When conventional methods face ambiguity or conflicting statements, the polygraph serves as a tool to assess the veracity of information by monitoring physiological responses and using the test data to train an AI model that shows high test accuracy.

1512. UNDYING SHADOWS

Project Advisor	MR. FARAZ ALI
Status	In Process of Completion

Undying Shadows is a 3D single-player game that combines FPS and TPS perspectives, set in a city devastated by a deadly virus outbreak. The player takes on the role of the Main Character, tasked with rescuing survivors and combating infected creatures. The significance of this project lies in its ability to provide an engaging and immersive gaming experience through strategic combat, puzzles, and decision-making that impacts the game's outcome. Utilizing expertise in game development, AI, and visual effects, the project aims to create a visually stunning and dynamic game. Expected results include advanced enemy AI, high-quality 3D models, immersive environments, and a rich storyline, all of which contribute to enhancing player engagement and delivering a compelling gameplay experience.

1513. PAY MATE: EMPOWERING SEAMLESS MOBILE PAYMENTS

Project Advisor	MR. FARAZ ALI
Status	In Process of Completion

This project aims to develop a mobile payment application leveraging **Near Field Communication (NFC)** technology to enable contactless and seamless transactions. With the growing demand for convenient and secure payment methods, NFC emerges as a promising solution due to its simplicity and reliability. The application will offer users the ability to make transactions swiftly by simply tapping their smartphones against NFC-enabled terminals, eliminating the need for physical cards or cash. The development process involves several key components. Firstly, the application will incorporate robust security measures to ensure the confidentiality and integrity of users' financial information. Secondly, the user interface will be designed with a focus on simplicity and intuitiveness, allowing users to navigate through the app effortlessly and initiate transactions with minimal effort. Overall, the NFC-enabled mobile payment application aims to revolutionize the way people conduct transactions by offering a seamless, secure, and convenient payment experience.

1514. BALANCE BITE: EAT WELL LIVE WELL

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

The BalanceBite project is on a mission to simplify health management in today's fast-paced world. At its core lies an innovative app designed to provide personalized guidance on nutrition, organic eating, and physical activity. With the abundance of health information available, finding advice tailored to

individual needs can be daunting. To tackle this challenge, we're harnessing the power of computer science, leveraging skills in software engineering, data science, and artificial intelligence.

Our app will revolutionize the way people approach their health by offering tailored solutions that fit seamlessly into their lifestyles. Through sophisticated algorithms, users will receive personalized nutrition plans, recommendations for organic diets, and exercise routines curated to meet their specific goals and preferences. Moreover, the inclusion of an AI chatbot will add a human touch, providing users with friendly and accessible guidance whenever they need it.

By combining cutting-edge technology with a user-centric approach, BalanceBite aims to make healthy living more accessible and enjoyable for everyone. Our vision is to empower individuals to take control of their health journey with confidence, knowing they have a reliable companion to support them every step of the way. With our app, achieving and maintaining a balanced lifestyle will become not only feasible but also an enriching experience that enhances overall well-being.

1515. VIRTUALDERM: REVOLUTIONIZING SKINCARE

Project Advisor	MR. IRFAN ANJUM
Status	In Process of Completion

This React JS project revolutionizes online skincare by integrating telemedicine with intelligent algorithms. Upon registration, users upload a photo of their face and specify their skin tone, allowing the system to identify skin concerns such as acne, blackheads, rosacea, and dryness. Using advanced algorithms, the system provides personalized skincare product recommendations, which users can choose to accept or decline. The integration of telemedicine ensures that users receive accurate and up-to-date skincare advice. Furthermore, the system's machine learning capabilities continuously improve the accuracy of its recommendations by learning from user feedback and data. This approach not only personalizes the skincare experience but also adapts to the evolving needs of users, making it a dynamic and responsive solution. Ultimately, our project aims to bridge the gap between users and skincare professionals, offering a convenient and effective way to manage skin health from the comfort of home.

The user interface facilitates seamless browsing, product selection, cart management, and secure checkout. Administrators have comprehensive control over product management, category editing, and access to detailed reports on sales, customer data, and product analytics. Additionally, a Chatbot feature enables real-time communication, allowing users to seek advice and information about skincare concerns. The intuitive design of the interface ensures that users of all technical skill levels can easily navigate the platform. Advanced filtering and search options help users quickly find the products that best meet their needs. Secure checkout processes protect user data and ensure safe transactions. Regular updates and maintenance keep the interface running smoothly, providing a consistent and reliable user experience. By prioritizing usability and functionality, the interface enhances overall user satisfaction and engagement.

To ensure the reliability of the skincare recommendations, a validation module collaborates with skincare practitioners to verify the system-generated advice. This integration enhances the system's accuracy and effectiveness, providing users with professional, validated skincare solutions. The validation process involves regular reviews and updates from certified skincare experts, ensuring that the recommendations stay current with the latest research and trends in dermatology. This collaboration not only boosts user confidence in the recommendations but also helps to maintain the credibility of the platform. Users can access detailed information about the validation process and the experts involved, fostering transparency and trust. Additionally, feedback from users is continuously collected and analyzed to further refine the recommendations. By combining technological innovation with professional expertise, the platform delivers a reliable and trustworthy skincare experience.

1516. AGRICULTURAL QUADCOPTER

Project Advisor	MR. IRFAN ANJUM
Status	In Process of Completion

In precision agriculture, technological innovations have consistently led to more effective and sustainable farming methods. This proposal introduces a pioneering project aimed at developing an Agricultural Quadcopter equipped with advanced spraying mechanisms. By integrating spraying capabilities onto a quadcopter platform, the system will enable targeted and efficient application of pesticides, fertilizers, and other agrochemicals, leading to improved crop health management and increased yields. The primary goal is to enhance the precision in the application of pesticides, fertilizers, and other agrochemicals, thereby optimizing crop health and increasing yield. The proposed system leverages innovative Unmanned Aerial Vehicle (UAV) technology to deliver targeted spray treatments based on real-time data collected through integrated sensors. This approach not only ensures the efficient use of resources but also reduces environmental impact by minimizing runoff and over-application of chemicals. This document outlines the technical and functional specifications of the quadcopter, including autonomous navigation capabilities, sensor integration for crop monitoring, and an intuitive user interface for trouble-free operation. The project is directed towards stakeholders in the agricultural sector, including technology developers, farmers, and regulatory bodies, with the aim of providing a scalable solution adaptable to different crops and farm sizes. By adopting this innovative quadcopter solution, the project aspires to set a new standard in precision agriculture, leading to more sustainable farming practices and better management of agricultural inputs. The ultimate vision is to enhance crop yields and promote environmental sustainability, aligning with global goals for sustainable development.

1517. LEARNER'S LAB

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Learner's Lab is an innovative online learning platform targeting students in grades 1 to 8, aiming to provide a comprehensive educational experience that bridges the gap between traditional schooling and modern educational demands. This platform uniquely offers a complete curriculum in both English and Urdu, leveraging advanced technology to facilitate personalized learning paths, progress tracking, and career guidance. The project addresses the need for a more adaptable and personalized education system that can efficiently integrate into the daily lives of students and their families.

1518. AUTHOR SPHERE

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

The “Author Sphere” project bridges the gap between academia and industry by creating an interactive online portal. This platform connects researchers and sponsors, facilitating collaboration and innovation. Traditional research often remains confined to academic circles, lacking real-world impact. Meanwhile, sponsors struggle to find relevant projects for investment. Our solution involves a dynamic portal where researchers showcase their work, and sophisticated algorithms match papers with sponsor’s profile description. Researchers can exchange author positions for funding, creating a win-win situation. The expected outcomes include increased collaboration, accelerated innovation, and enhanced visibility for both researchers and sponsors. Author Sphere revolutionizes knowledge exchange and practical application, fostering a vibrant ecosystem of ideas.

1519. CLEAN FIT CLUB

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Over nourishment and poor nutrition are major problems we are facing in the modern world. There are many reasons that are contributing to this, and we aim to remedy three of these issues which are indecisiveness, unawareness and inconsistency. With our understanding of how to build applications, we aim to build a mobile web application that will help people on their health and fitness journey by automating all the recipes (while keeping in mind their preferences or preexisting medical conditions) based on the user's current location. And then providing a meal plan, which we will then use behavioral reinforcement through gamification so the user stays consistent with their dietary plan.

1520. DYNAMIC QUESTION GENERATION FROM TRANSCRIPTS

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Traditional interview methods often fall short because they rely on a set list of questions and uniform difficulty levels. This approach doesn't account for the unique qualities of each candidate. Our project aims to solve this problem by creating a dynamic interview system that adapts to each candidate. We analyze the interview transcript and monitor facial expressions to tailor questions on the spot. This way, the interview becomes more personalized and responsive to the candidate's individual strengths and weaknesses. By using these insights, our system can provide a more accurate and relevant assessment of each candidate. This innovative approach is designed to revolutionize the interview process, making it fairer and more effective in evaluating a candidate's true potential. Our goal is to enhance the overall interview experience and improve the way candidates are assessed.

1521. AUTOMATED E-COMMERCE DATA SYNDICATION MIDDLEWARE

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

The "Automated Profit-Enhanced Data Syndication" project proposes a sophisticated middleware solution designed to simplify and streamline the data exchange process between e-commerce retailers and sellers. This project addresses the critical need for efficient, accurate, and secure management of product information in the fast-paced world of e-commerce.

The system leverages advanced web scraping techniques to extract detailed product information, including descriptions, prices, and availability, from various prominent online platforms such as Daraz and Amazon. By automating this data extraction process, the system significantly reduces the manual effort required by businesses to keep their product listings up-to-date.

A key innovation in this project is the integration of artificial intelligence (AI) algorithms. These AI algorithms dynamically analyze a range of factors, including market trends, competitor pricing strategies, and historical sales data, to optimize pricing strategies in real-time. This dynamic pricing optimization ensures that the prices are adjusted to maximize profitability while remaining competitive in the market. By taking into account various market conditions and consumer behavior patterns, the AI-driven module provides a strategic advantage to sellers.

Ensuring the integrity and confidentiality of the transmitted information is paramount. The project incorporates advanced security measures, including secure authentication protocols and data encryption techniques, to protect sensitive data during transmission. This focus on security ensures that the system complies with legal and ethical standards, safeguarding user privacy and maintaining trust.

The user interface of the system is designed to be intuitive and user-friendly. It allows users to easily configure profit margins according to their business strategies and monitor system activities in real-time. This interface is supported by robust logging and error-handling mechanisms that provide transparency and facilitate troubleshooting. These features ensure that users can manage the system effectively without requiring extensive technical expertise.

The project is designed with scalability in mind, capable of accommodating an expanding network of e-commerce platforms. This scalability ensures that the solution can grow alongside the businesses that use it, adapting to new challenges and opportunities in the e-commerce landscape.

In summary, the "Automated Profit-Enhanced Data Syndication" project aims to deliver a comprehensive middleware solution that enhances operational efficiency, profitability, and overall user experience for businesses involved in e-commerce and product syndication. By automating data extraction and leveraging AI for dynamic pricing, the project not only addresses current inefficiencies but also provides a scalable and secure foundation for future growth and competitiveness in the e-commerce sector.

1522. ENFORCEDRIVE PRO

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

EnforceDrive Pro addresses the pressing issue of road safety by providing an immersive gaming experience where players navigate through realistic driving scenarios while adhering to traffic rules and overcoming challenges. The significance of this problem lies in the alarming rates of road accidents and violations due to lack of awareness and adherence to traffic regulations. By combining entertainment with education, the game aims to instill responsible driving habits and promote road safety awareness among players. The project draws upon knowledge areas such as game development, traffic regulations, user experience design, and psychology to create an engaging and effective learning platform. The anticipated results include improved player understanding of traffic rules, enhanced driving skills, and ultimately, a positive impact on real-world road safety.

1523. CHRONICLES OF WHISPERS END

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

"Chronicles of Whispers End" is an ambitious open-world adventure game set in the mystical realm of Eldoria, where players embark on a quest to recover the Arcane Stones, powerful artifacts crucial for maintaining the balance between magic and the physical world. In this immersive gaming experience, players navigate diverse landscapes, solve intricate puzzles, and engage in dynamic combat encounters against mythical creatures, all while unraveling the mysteries of Eldoria's rich lore.

The project aims to address the challenge of seamlessly integrating puzzle-solving and combat mechanics within an open-world environment, providing players with a holistic and engaging gameplay experience. Through the utilization of advanced AI algorithms, players will encounter dynamic NPC behaviors and interactions, further enhancing the immersion and depth of the game world.

Key objectives include the development of a cohesive and immersive game world, the implementation of innovative puzzle and combat systems, and the utilization of advanced AI techniques to create dynamic and responsive NPC encounters. By pushing the boundaries of traditional game design and leveraging cutting-edge technology, "Chronicles of Whispers End" aims to captivate players' imaginations and deliver an unforgettable gaming experience set in a world teeming with magic and adventure.

1524. ADVOCACY TRAININGS ONLINE LEARNING SYSTEM

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Nowadays, as the technology is enhancing, many traditional systems have adopted new technologies for learning. In the current scenario, the Traditional Advocacy Training involves a single instructor inside the class, which cannot focus on all individuals, so it often lacks the flexibility necessary to facilitate the different learning needs of students. Due to this many students lose their interest and stop learning the skills which they need for advocacy. This proposed system will change the traditional training of advocacy to an online learning system, in which advisors can evaluate the students and keep record of the progress of students with the help of the proposed system. This system is designed to cater the unique learning needs of students in advocacy training by providing feedback, resources, and guidance tailored to their progress and performance. This system is designed to provide personalized learning experiences for students involved in advocacy training. It tailors the educational content, exercises, and assessments to suit the individual learning styles, pace, and preferences of each student. The core features are the feedback mechanism. Our proposed system ensures that students receive targeted feedback, enabling them to focus on areas that require improvement while reinforcing their strengths. In this project we will be using blending learning in which students, once students submit their responses, the advisors will receive their responses and will give their feedback accordingly. Based on the feedback, students can resubmit their attempted assessment. The proposed system will cover two training programs including early bird training and family court training. In both training programs student's will interact with online e-learning web applications and start their learning according to the given curriculum by the trainers. The end product will be a 3 faced website (admin, student, and advisor) which have 2 modules 8 to 12 steps in each module.

1525. AI- POWERED ADAPTIVE E-LEARNING PLATFORM WITH AT-RISK STUDENTS DETECTION

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

In online classrooms, it is challenging for teachers to focus on the individual needs of students and monitor their engagement based on class participation. To address this, we have proposed an AI adaptive e-learning system designed to detect at-risk students during the online learning process. At-risk students are those who struggle with learning and have a higher chance of disengagement [1] due to a lack of timely assistance. In this proposed e-learning system, students will create profiles, enroll in the offered subjects, and begin their learning journey accordingly. After completing a specific topic, students will undertake an assessment. This platform allows students to enhance their learning by attempting assessment tasks. The system will adjust the difficulty of assessments based on each student's performance and current affective state. Additionally, it will monitor progress in real-time and make necessary adjustments. Upon identifying at-risk students, the system will employ effective lexicons or phrases, as outlined in [2], to motivate them and provide tailored hints to suit their learning needs, which can enhance their activeness and class participation.

1526. STUDENT ADVISORY PORTAL

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

This project proposes a web platform designed to empower Pakistani students in navigating the university selection process. The website answers to the challenge of limited knowledge and resources by offering specific guidance and evaluation tools. Students input their academic background including Matric or O Level and Intermediate or A Level results and select their preferred fields of interest. The website then generates an adaptive test according to their chosen field and analyzes the results alongside academic history. This comprehensive data is used to recommend universities and programs with a "probability of success" score for each option. In addition, students can indicate their preferred city for a specific location university list. This user-friendly portal wants to help students achieve their educational goals through offering tools for taking educated choices.

1527. INTELLIDISH

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

IntelliDish is a web-based food app that provides people assistance in cooking better meals. It uses smart technology to suggest recipes based on what users like to eat. This app is important as it solves the problem of finding recipes according to people's tastes and dietary needs. By using artificial intelligence and other technical skills, IntelliDish makes it easy for users to find recipes, alternate ingredients, and even ordering food. The app aims to make cooking more fun and convenient for everyone, regardless of their cooking skills.

1528. ETL PIPELINES FOR BANKING SYSTEM

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

For modern organizations looking to preserve their competitiveness and exploit insights, efficient ETL data operations are essential. The goal of this project is to manage varied data sources and formats by creating customized ETL pipelines for e-commerce websites. Our method streamlines data gathering, processing, and integration to enable in-depth analysis and well-informed decision-making by combining web scraping, database administration, and data engineering.

The project's goal is to provide reliable, scalable ETL pipelines that can manage substantial amounts of e-commerce data. Performance measurements and case studies will be used to highlight the pipelines' potential to promote innovation and competition in the online market.

1529. ON ROAD VEHICLE BREAKDOWN ASSISTANCE

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

Our proposed system will address the lack of efficient and readily available on-road vehicle breakdown assistance. Vehicle breakdowns can have a significant impact on a person's safety, convenience, and overall well-being. However, many individuals struggle to find timely and reliable help during a vehicle breakdown, especially in unfamiliar or remote areas. Traditional roadside assistance services are often expensive and limited by geographic constraints, requiring in-person interactions with service providers. Additionally, the one-size-fits-all approach may not meet the diverse needs and preferences of different drivers. By leveraging advanced technologies and algorithms to deliver personalized and data-driven vehicle breakdown assistance on a large scale, this project aims to address these issues.

1530. TEXTINSIGHT- EMPOWERING STUDENT IS ESSAY WRITING AND TOPIC ANALYSIS

Project Advisor	MR. MOHSIN ABBAS
Status	In Process of Completion

TextInsight transforms the essay writing experience for students, focusing on aligning their essays with assigned topics and enhancing their understanding of the subject matter. By analyzing keywords, TextInsight evaluates how well essays match the topic. Instead, it aims to deepen students' comprehension by providing insights into the topic's intricacies. Through this approach, students gain a clearer understanding of the subject, enabling them to refine their arguments effectively. TextInsight integrates natural language processing and educational principles to ensure feedback not only improves writing alignment but also enriches students' understanding of the topic. This project offers a user-friendly solution that empowers students to excel in writing while fostering a deeper appreciation for the subjects they explore.

1531. THE PET PALACE- A COMPREHENSIVE PET CARE AND WELLNESS APP

Project Advisor	MR. MOHSIN ABBAS
Status	In Process of Completion

The Pet Palace is an app designed to make pet ownership easier and more enjoyable. It offers features like online vet consultations, Pet Profiles, GPS Pet Tracking, an Emergency SOS Button, buying/selling pets and supplies, and finding trustworthy pet sitters. The app also promotes responsible breeding practices and provides personalized food recommendations based on the pet's breed. This project aims to address the common challenges faced by pet owners, such as accessing veterinary care, ensuring pet safety, and finding reliable pet care services.

1532. DMFT SYSTEM

Project Advisor	MR. MOHSIN ABBAS
Status	In Process of Completion

The DMFT (Decayed Missing Filled Teeth) system addresses the challenge of extracting relevant information from images to determine the type of teeth—whether decayed, filled, or missing. This process is complicated by grainy or low-quality photos, making it difficult to distinguish between filled teeth and those with decay.

Accurate extraction from uploaded images is crucial, as the continuation of dental procedures depends on correctly identifying the condition of the teeth according to the DMFT index. Without accurate identification, we will not be able to proceed with appropriate treatment.

The DMFT system encompasses several knowledge areas, including image processing, machine learning, artificial intelligence, and web development.

The anticipated results include the successful implementation of a user-friendly interface for easy monitoring and efficient algorithms for DMFT analysis. Achieving these objectives is expected to significantly enhance oral health monitoring and management, ensuring better dental care outcomes.

1533. SMOKESONAR PRO

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

Traditional car diagnostics are often suffered from imprecision, resulting in possible client misguidance by mechanics. This issue arises due to the limitations of manual inspection methods, resulting in inefficiencies and increased risks for vehicle owners. The significance of this problem lies in its widespread impact on both car owners and the automotive industry as a whole. Inaccurate diagnostics can lead to unnecessary repairs, financial losses, and compromised safety. Addressing this issue is crucial for enhancing client trust, improving service quality, and advancing the efficiency of car maintenance processes. SmokeSonar integrates knowledge from multiple disciplines, including computer vision, sound analysis. The project aims to develop sophisticated algorithms and technologies capable of accurately diagnosing engine issues and assessing body conditions. Its primary objective is to deliver improved diagnostic, accuracy, transparency, and client satisfaction. By implementing computer vision algorithms for image analysis and sound analysis for engine and body diagnostics, the project seeks to provide reliable solutions to the challenges faced in traditional car maintenance practices. The ultimate goal is to revolutionize the automotive industry by offering accessible and precise diagnostics, thereby enhancing safety and efficiency for drivers worldwide.

1534. DEADSHOT

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

In the fast growing field of software engineering and development and even more rapidly growing sector of game development the future is very hard to predict. We are working with this game for doing better with development cycle, development period, graphics, scripting, adopting new technologies and animation. In general, software project is a project focusing on the creation of software. Consequently, success can be measured by taking a look at the resulting software. Whereas in a game project, a game is much more complex than a software. It has to provide content to become enjoyable. Just like a web server, without content the server is useless and the quality cannot be

measured. This has an important effect on the game creation process as a whole. This software part of the game is not the only one, and it must be considered in connection to all other parts: The environment of the game, the story, characters, gameplays, the artwork and so on.

Our project will work on windows. Deadshot is a third-person shooter game. It is a multileveled game having three different stages. The enemies are based on real-life stories. As the player progresses the game will become harder. The game has an in-app purchase feature to unlock attractive features. The player becomes addictive as he has to progress up to be called conqueror.

The purpose of this application, is to provide a virtual image for the combination of both structured and unstructured of our project “Deadshot”. The game encourages creativity and daring via different maps in this game. The leveled structure of the game facilitates the pace of the story. The proposed project is intended for general public. The proposed project is intended for public use. Its scope is general in nature.

1535. CAMPUS HUB- AN ONLINE COMMUNITY FOR UCP

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

CampusHub is a university-focused anonymous forum platform prioritizing user anonymity to encourage open communication, collaboration, and well-being within the campus community. Designed with a focus on preserving user privacy, the platform empowers students, faculty, and staff to engage in transparent discussions without the constraints of identity disclosure. With dedicated sections for Question/Answer threads, event coordination, and general discussions, CampusHub serves as a centralized hub for interactions. Key features include anonymous job reviews, study group facilitation, and different post categories, facilitating community building. The platform integrates automated moderation of content and different post categories while employing a like system similar to Blind for user engagement. A robust notification system keeps users informed, and anonymous surveys gather feedback for continuous improvement. Integration with university emails ensures maintaining the exclusivity of the community, while mental health resources and moderation tools would promote a supportive environment. CampusHub aims to bring change in the university experience by fostering collaboration among its users.

1536. AISTITCH

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

It is an innovative platform transforming fashion customization through artificial intelligence (AI) and 3D modeling technology. It addresses the gap between consumer demand for personalized clothing and the limitations of current customization tools, which are often time-consuming and complex. AiStitch offers an automated, user-friendly solution that enhances creativity and design flexibility. By leveraging AI for design generation and recommendations, and providing real-time 3D visualization, the platform simplifies the customization process. It integrates seamlessly with production processes, allowing users to easily bring their unique creations to life. AiStitch aims to deliver an enhanced user experience, significant time and cost savings, and improved accessibility to fashion customization. It also fosters stronger customer engagement for apparel producers, setting new standards in the fashion industry and driving innovation in personalized clothing design.

1537. ROUTELINK: TRAVEL SYNERGY

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
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Status	In Process of Completion
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"Route Link: Travel Synergy" is a web application designed to streamline travel management by providing users with personalized tour plans based on their preferences. The project addresses the challenge of creating tailored travel experiences, highlighting the need for efficient planning and reliable information. By leveraging user preferences and history, the system recommends optimal travel plans and ideal destinations. Additionally, the platform features certified professional tour guides who offer real-time assistance, book hotels, and provide authentic reviews, enhancing the overall travel experience. The application aims to simplify travel planning, improve user satisfaction, and ensure authenticity and reliability through professional guidance and user feedback.

1538. INTESTISCAN: GASTROINTESTINAL DISEASE CLASSIFICATION

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

Currently, nearly two million patients die of gastrointestinal diseases worldwide. Video endoscopy is one of the latest technologies in the medical imaging field for the diagnosis of gastrointestinal diseases, such as stomach ulcers, bleeding, and polyps. Medical video endoscopy generates many images, so doctors need considerable time to follow up all the images. This creates a challenge for manual diagnosis and has encouraged investigations into computer-aided techniques to diagnose all the generated images in a short period and with high accuracy. This project represents a notable advancement by undertaking the creation of an AI assistant tailored explicitly for the biomedical industry, with a central focus on precise image analysis of gastrointestinal diseases, utilizing the extensive Kavsir dataset. The primary objective is to aid patients and healthcare professionals in comprehending and interpreting gastrointestinal images effectively. IntestiScan incorporates advanced techniques leveraging the comprehensive Kavsir dataset, rich with labelled gastrointestinal images. The goal is to offer users a dependable and educational platform for gaining insightful knowledge from gastrointestinal data, thereby augmenting their understanding. This initiative facilitates swift and accurate diagnoses of gastrointestinal diseases using the Kavsir dataset, providing a trustworthy resource for healthcare professionals and the public.

1539. LEGACY HEAVEN WITH MULTI-LINGUAL SUPPORT

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

The last century has witnessed a rapid increase in the population of the elderly people in the developed and industrialized countries. This phenomenon is not restricted to the western world only, but many countries such as ours are now feeling the impact of this transaction. This situation could be attributed to a combination of factors such as increase in age, longevity and decreased death rates due to advancement in the field of medicine, improvement of life expectancy at birth, and enhancement in the average span of life. Pakistan ranks 12th in terms of absolute size of elderly population .The country is not adequately equipped to look after their special health needs and the changing traditional value system. A feeling is now growing among the aged persons that the attitude of the younger generation towards them is not as desired.

The data was collected using a specially designed Interview schedule and observation technique through a house- to-house survey for those residing in the families. Non-working status of these women and above 60 years of age was criteria for sample selection. Results of the study revealed that most of the elderly felt the attitude of the younger generation is unsatisfactory towards them especially

those who were in old age homes in terms of getting respect, love and affection from the family members instead they were considered as burden for others. Women living in the families had a positive attitude towards old age. The social relationship of the elderly women living in families and those living in old age home also differed.

Legacy heaven with multi-lingual support is a web application that provides an end-to-end smart web application for old age people and old age homes. In this platform firstly, we will create a chatbot which will answer the users some of their FAQs. This platform will provide the login credentials to all the siblings/ child of the old age home users so they can check their health and food diet on daily basis. With this platform they can also check whether their forefather/ guardian is critically ill or needs visit. In this platform we will add e-commerce functionality so if anyone want to donate, they can donate as well. As this is not for single old age home so in this project, we will target all the old age home of Lahore.

1540. COUNTERFEIT MONEY DETECTOR

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

The purpose of this app is to develop a mobile application for the detection of counterfeit money. Currently, there is an app that only provides information about the banknotes but does not detect fake money. Nowadays, Counterfeit currency is a burning question throughout the world. The counterfeiters are becoming harder to track down because of their rapid adaptation with highly advanced technology. One of the most effective methods to stop counterfeiting can be the widespread use of counterfeit detection tools/software that are easily available and are efficient in terms of cost, reliability, and accuracy we face a lot of economic crisis with the counterfeiting of money. By reducing or eliminating the chances of money counterfeiting we can improve the economy and save people from financial loss. For this purpose, we are proposing a Counterfeit Money Detector application that will detect the note by the method of deep learning techniques. After analyzing the image of the note it will generate a report that will tell if the note is fake or not. If the note is fake then it will provide us the reason behind that why the currency is counterfeit. By using our application we can easily reduce the chances of money counterfeiting.

1541. SWIFT SURPRISE

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

Swift Surprise is a groundbreaking mobile application designed to revolutionize the gifting experience by combining convenience with heartfelt personalization. Key features of our app include an AI chatbot for personalized assistance, customizable gift options, stylish packing, a feedback mechanism, reward points, and a reliable tracking system. These elements work together to make gifting seamless and delightful.

The major goal to develop the “Swift Surprise” app is to send thoughtful, personalized gifts directly through our platform, especially for those who didn’t have enough time to explore the market. By addressing the modern challenges of impersonal and time-consuming gifting processes, Swift Surprise fosters deeper connections and brings joy to both givers and recipients, redefining the art of gifting in today's fast-paced world.

1542. WELLGNOSTIC AI

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

The Wellgnostic AI project aims to develop an advanced AI-based application designed to diagnose wellness issues using user data inputs. The project addresses the significant problem of accessible and accurate health diagnostics, leveraging knowledge areas in AI, machine learning, and software development. The expected outcome is an AI-powered diagnostic tool that improves healthcare accessibility and efficiency.

1543. REALTIME PROGSYNC

Project Advisor	MR. SYED SAQLAIN HAIDER
Status	In Process of Completion

In today's digital age, learning to code is becoming increasingly essential across various disciplines. However, many beginners struggle with self-guided learning due to the lack of interactive and engaging resources. Traditional coding tutorials often provide static explanations without dynamic feedback, making it challenging for learners to grasp concepts effectively.

The goal of this project is to develop a web-based guided coding platform that offers interactive tutorials and exercises for beginners to learn programming. The platform should provide a guided learning experience where users can follow step-by-step instructions, receive immediate feedback from their respective tutors, and practice coding in a supportive environment.

1544. DAIRY FARM MANAGEMENT SYSTEM ANDROID APP

Project Advisor	MR. USAMA PERVAIZ
Status	In Process of Completion

Dairy farming remains a cornerstone of global food production, providing essential dietary staples for millions. Despite its critical importance, traditional approaches to managing dairy farms are fraught with inefficiencies and challenges. Central among these are the reliance on outdated, manual record-keeping systems that lead to inaccuracies, procedural delays, and operational inefficiencies. These traditional methods impose a heavy burden on farmers, who must navigate through a labyrinth of disjointed processes that hinder the optimization of productivity and the streamlining of farm operations.

The Dairy Management System aims to revolutionize dairy farm management by providing a comprehensive, centralized solution that addresses these longstanding issues. This innovative system seamlessly integrates multiple facets of dairy farm operations, including animal care, inventory management, human resource coordination, and data analysis.

One of the critical components of the Dairy Management System is its comprehensive animal care management module. This module enables farmers to meticulously track health records, manage feeding schedules, and oversee breeding information. The system ensures that detailed health records, encompassing vaccinations, treatments, and notable health events, are maintained for the comprehensive well-being of the dairy herd. Such meticulous data management facilitates informed decision-making for veterinarians and farm managers, ultimately promoting animal welfare and optimizing productivity.

The inventory management module of the Dairy Management System addresses another significant challenge in traditional dairy farming tracking and managing vital supplies such as animal feed and medicines. By providing real-time inventory data and automated alerts for replenishment, the system helps farmers ensure timely restocking of essential resources. This minimizes disruptions to farm operations, prevents waste, and maximizes the efficiency of supply chain management.

Human resource management is another critical aspect of the Dairy Management System. Efficient task allocation is paramount to the smooth operation of dairy farms. The system facilitates the assignment of tasks to dairy workers, ensures timely execution of critical farm activities, and monitors worker performance and productivity. By streamlining communication and fostering collaboration amongst farm personnel, the system enhances operational efficiency and accountability.

The system's data analysis capabilities extend its functionality beyond mere record-keeping. Leveraging advanced AI algorithms, the Dairy Management System provides invaluable insights into farm operations. By analyzing historical and real-time data on animal health, productivity, and resource utilization, the system identifies trends and patterns that empower farmers to make informed, data-driven decisions. Predictive analytics suggest optimal strategies for breeding, feeding, and resource allocation, helping farmers mitigate risks and capitalize on opportunities for sustainable growth.

Implementing such a system promises to revolutionize the dairy farming landscape. It aims to improve operational efficiency, reduce labor costs, and enhance animal welfare, ultimately leading to increased productivity and profitability. By embracing modern dairy management practices and leveraging cutting-edge technologies, the Dairy Management System positions itself as a transformative tool that not only meets the current demands of the agriculture industry but also sets new standards for innovation and sustainability.

1545. TOWING GUY

Project Advisor	MR. USAMA PERVAIZ
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Status	In Process of Completion
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Our mobile app revolutionizes car management by providing seamless support for various challenges, ranging from towing newly purchased cars to handling breakdowns. With an intuitive interface, users can easily request urgent assistance and connect with mechanics for expert guidance. Integrated payment options ensure secure transactions, while transparent pricing prevents surprises. Overall, our app simplifies car management, making it easier and more convenient for users.

1546. MYSTERY BITES

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

Mystery Bites is a software application that detects a person's emotions using machine learning and suggests food items that align with their mood. The application uses a camera to scan the person's face and recognize their emotions, and then recommends food items based on an algorithm. The idea is to provide maximum food satisfaction by matching the person's emotional state with their food preferences.

1547. INSIGHTCRAFT- ENHANCEMENT) (AI-DRIVEN CUSTOMER EXPERIENCE

Project Advisor	MR. USMAN AHMED RAZA
Status	In Process of Completion

Insight Craft is a web tool using AI to help clients find the best software houses for their projects and assist IT professionals in finding jobs. By providing personalized recommendations and detailed information, it aims to simplify and speed up the process of selecting software houses and finding IT jobs. Built with the MERN stack (MongoDB, Express.js, React.js, Node.js), it addresses inefficiencies in traditional methods, aiming to reduce project delays and improve job matches. The project covers areas such as software engineering, database management, web development, AI, user experience design, and data analysis, resulting in a user-friendly application that enhances decision-making for clients and job seekers.

1548. VOUGEVIBE

Project Advisor	MR. ZEESHAN AKRAM
Status	In Process of Completion

The "Vogue Vibe" project endeavors to revolutionize the beauty and wellness industry by addressing the persistent challenges encountered by salon owners and customers alike. In an era marked by the rapid expansion of the beauty market, traditional salon management methods often fall short in meeting the evolving needs and expectations of modern consumers. Manual booking systems, inefficient scheduling practices, and a lack of advanced client engagement tools hinder salon operations and compromise service quality. Recognizing these limitations, the Vogue Vibe platform emerges as a comprehensive solution, leveraging cutting-edge technology to modernize salon operations and elevate the customer experience. By automating booking processes, optimizing scheduling algorithms, and integrating seamless communication channels, Vogue Vibe empowers salon owners to enhance productivity, maximize resource utilization, and foster stronger connections with their clientele. Furthermore, the platform facilitates online payments, streamlining transactions and improving financial efficiency. Beyond addressing immediate operational hurdles, the project holds significant implications for the broader beauty industry, aiming to set new standards of service excellence and professionalism. The multidisciplinary nature of the project draws upon diverse knowledge areas including software development, user experience design, and business management. Through collaborative efforts, the project endeavors to achieve tangible outcomes such as increased operational efficiency for salon owners, heightened customer satisfaction, and accelerated business growth. By embracing innovation and embracing the Vogue Vibe platform, salon owners can navigate the competitive landscape with confidence, ensuring sustained success in an ever-evolving market environment.

1549. INTEGRATED HEALTH MONITORING VEST

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

This project focuses on developing a Health Vest equipped with an Arduino Uno R3 to monitor vital health metrics, specifically pulse oximetry, body temperature, blood pressure, and ECG monitoring. The significance of the problem lies in the growing need for real-time, non-invasive health monitoring devices that can provide crucial data for early diagnosis and health management. This project bridges knowledge areas in biomedical engineering, embedded systems, and software development to deliver a wearable health monitoring solution. Expected results include the successful integration of sensors for the stated health metrics into the vest, alongside a software interface for data visualization and analysis.

1550. UNI APP WITH NFC SUPPORT

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

The "UNI App with NFC Support" project aims to revolutionize the university experience by integrating Near Field Communication (NFC) technology into a comprehensive mobile application. This app addresses significant challenges faced by students, such as managing physical ID cards and accessing academic information efficiently. By providing a centralized platform, the app allows students to enter university premises and access academic resources with a simple scan of their mobile

devices, eliminating the need for physical cards. The project combines advancements in mobile technology, NFC, and user-friendly design to enhance convenience and efficiency. Key knowledge areas include product design, web development, database management, and software engineering. The expected outcome is a fully operational mobile application that streamlines campus access and academic information management, offering a seamless and integrated university experience.

1551. RESURGENCE: A RISING AGAIN INTO LIFE

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Resurgence: A Rising Again Into Life is a comprehensive final year project aimed at creating a highly engaging, optimized, and accessible video game. The project addresses significant issues in the gaming industry, such as high game prices, poor storylines, and excessively large game file sizes. It integrates a captivating narrative with dynamic gameplay, advanced AI, and efficient storage management to deliver an exceptional gaming experience. This project fosters growth and improvement in several key areas: game design and development, by crafting a captivating game environment and mechanics; artificial intelligence, by implementing intelligent NPC behaviors; database management, by efficiently handling game data and player progress. file size optimization, by reducing game size without compromising quality and game optimization, by enhancing performance across various platforms. The completion of this project will result in a highly engaging game that demonstrates advanced AI, a compelling storyline, and significant improvements in file size management and performance optimization.

1552. WEB-BASED ACTIVE DIRECTORY IDENTITY MANAGEMENT SYSTEM

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

The Web-based Active Directory Identity Management System project addresses the complexities and inefficiencies organizations face in managing identity and access within their Active Directory environments. Traditional methods of identity management often prove cumbersome, error-prone, and time-consuming, especially as organizations scale. This project aims to streamline these processes by developing a user-friendly web application that integrates seamlessly with Active Directory using modern technologies such as the .NET framework and LDAP protocol. The system features advanced functionalities like Elasticsearch integration for rapid search operations and history tracking with annotation capabilities. By automating tasks and empowering users with self-service options, the project enhances security, reduces administrative burden, and improves overall organizational efficiency. The expected outcomes include a more secure, efficient, and compliant identity management system that adapts to the evolving needs of modern enterprises.

1553. AI BASED ATTENDANCE SYSTEM WITH PARENTAL CONTROL

Project Advisor	MS. SEHAR ALI
Status	In Process of Completion

The AI-Based Attendance System with Parental Control is an innovative solution designed to streamline attendance management in educational institutions while ensuring real-time parental engagement. This system leverages advanced facial recognition technology to automate the attendance process, significantly reducing administrative workload and increasing accuracy. Each student's

attendance is recorded by CCTV cameras, and the data is processed using sophisticated machine learning algorithms implemented through tools like OpenCV and TensorFlow.

One of the standout features of this system is the parental control aspect, which provides parents with immediate updates on their child's attendance status via a dedicated mobile application. This feature not only enhances communication between the school and parents but also allows for better monitoring of student attendance and participation.

The system is designed with a robust architecture that ensures data security and compliance with relevant data protection regulations. It integrates seamlessly with existing school management systems, ensuring smooth synchronization of student information and attendance records.

Key components of the system include high-resolution cameras for capturing images, servers with adequate processing power for data analysis, and a user-friendly interface for administrators and parents. The system is scalable, allowing it to be initially deployed for a small group of students with the capability to expand to accommodate larger student populations.

By implementing this AI-based attendance system, educational institutions can achieve improved efficiency, better data accuracy, enhanced parental engagement, and a higher level of data security, ultimately contributing to a more streamlined and effective educational environment.

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1554. ON-DEMAND CLEANING SERVICE: APP WITH INTEGRATED AI CHATBOT

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	In Process of Completion

This project endeavors to revolutionize the on-demand cleaning service industry by developing a mobile application that prioritizes user-friendliness. Conventional booking methods in this sector often prove cumbersome, necessitating innovative solutions. To address this challenge, the project harnesses Ai-Driven Chatbot technology to streamline booking, enhance user experience, and boost overall satisfaction. Drawing from expertise in mobile application development, artificial intelligence, and user experience design, the initiative seeks to simplify the booking process, offer immediate support through the chatbot, and foster seamless communication between users and cleaners. Anticipated outcomes include a simplified booking experience, real-time assistance via the Chatbot, and heightened engagement and retention rates. Ultimately, the project aspires to establish new benchmarks in on-demand cleaning services by delivering tailored solutions that cater to evolving user preferences.

1555. 24/7 DISPATCH SUPPORT

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

The 24/7 dispatch mobile application aims to streamline and optimize the process of dispatching services, providing efficient and timely assistance to users in need. The application leverages real-time communication and geolocation features to connect users with nearby service providers, ensuring rapid response and effective coordination. Through intuitive interfaces and seamless integration with mapping technologies, users can request assistance, track service providers' whereabouts, and receive updates on the status of their requests. The application prioritizes user experience, security, and reliability, employing industry-standard practices to safeguard user data and ensure uninterrupted service delivery. By harnessing the power of modern technologies, the 24/7 dispatch mobile

application seeks to redefine the paradigm of emergency response and service dispatching, empowering users with a reliable and accessible solution for their urgent needs.

1556. AGRIMS

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

This project aims to design and develop an Agriculture Management System (Agri MS) App for farmers in Pakistan, providing a comprehensive digital solution for efficient farm management. The app will offer features like crop monitoring, weather forecasting, market trends, financial tracking, and customer support, empowering farmers to make informed decisions and optimize resources. This project addresses challenges such as limited access to information, inefficient resource allocation, and reduced productivity in the agricultural sector. Expected outcomes include improved crop yields, enhanced decision-making, and increased profitability for farmers.

1557. GAIT ANALYSIS

Project Advisor	DR. M. ADNAN AZIZ
Status	In Process of Completion

Gait metrics, such as walking speed, cadence, symmetry, and gait variability are valuable clinical measurements in conditions such as Parkinson's disease, osteoarthritis, stroke, cerebral palsy, multiple sclerosis, and muscular dystrophy. These gait metrics are routinely used to diagnose pathological motion and plan treatment, and monitor outcomes. Quantitative analysis of motion is critical to medical decision-making but is currently possible only with expensive motion capture systems and highly trained personnel. It is complex and expensive and takes almost 30 minutes to setup the system. Video-based pose estimation can be a low-cost, easy-to-use alternative to monitor motion. In our proposed workflow, data is collected using a single commodity camera. The patient will walk back and forth along a 10 m path 3–5 times. The patient will be recorded with a camera 3–4 m from the line of walking of the patient. We use the OpenPose algorithm to extract trajectories of key-points from a sagittal-plane video, these signals are fed into a neural network that extracts clinically relevant metrics that are walking speed, cadence, knee flexion angle at maximum extension and gait deviation index. The proposed model has the potential to enable low-cost surveillance of disease progression. Our methods are dramatically lower in cost than optical motion capture and do not require specialized equipment or training. A therapist or technician need not place markers on a patient, and our models allow the use of commodity hardware (i.e., a single video camera).

1558. SIGNSPHERE: EMPOWERING INCLUSIVITY TO EQUAL TOURISM OPPORTUNITY BY INTERPRETING SIGN LANGUAGE

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

The SignSphere endeavors to revolutionize the travel experience for individuals with hearing impairments. By introducing a cutting-edge system, this project empowers deaf travelers to explore tourist attractions with sign language-based interaction. The system captures users' sign language expressions through footage, employing machine learning models to interpret and provide information (animated GIFs of sign based response), ensuring an inclusive and enriching journey.

Through our project we will introduce seamless sign language-based interaction, users can receive information and navigation guidance, fostering a more accessible and immersive travel experience.

1559. ARTISTREE: ART RETAIL PLATFORM

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

Artistree is an innovative web-based platform designed to bridge the gap between art enthusiasts and local artists who want to sell their handcrafted art. Our platform enhances the experience of discovering and supporting local artists. The Problem is that local artists find it hard to get seen and connect with people who might want to buy their art. At the same time, art lovers have trouble finding artists whose work they really like.

Existing e-commerce platforms fail to foster meaningful interactions between artists and buyers. Moreover, the demand for custom-made or on-demand art remains unmet in many online marketplaces.

Artistree significantly supports local artists by providing a platform for them to showcase and sell their handcrafted art. Additionally, it enhances art discovery, promotes meaningful interactions between artists and buyers, and meets the demand for custom artwork, enriching the art community.

Artistree ensures increased visibility and recognition for local artists, enhanced user engagement through transparent feedback mechanisms, and a more dynamic marketplace. Artistree represents a promising solution to the challenges faced by the local art community, offering a unique blend of portfolio showcasing, customized artwork services, and interactive bidding functionalities. Continuous user feedback and iterative improvements will be crucial in refining the platform and ensuring its effectiveness in meeting the evolving needs of its users.

1560. SMART HIRE

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

"Smart Hire" is a helpful website for educational institutes to easily find the right teachers. Institutes can post job openings and create custom tests for applicants. The site generates special links for each job and test so institutes can share them easily. Teachers can sign up, create profiles, and take tests using these links. The site automatically selects the best candidates based on test scores and informs institutes quickly. Institutes can then schedule interviews and communicate with teachers using messages on the site. "Smart Hire" also allows both institutes and teachers to share their thoughts and feedback. Additionally, to ensure enhanced security and monitoring, features like camera integration for security checks, proctoring for test monitoring, and face recognition have been incorporated. It's a simple and convenient way for educational institutes to find the perfect teachers for their needs.

1561. MASJID ONLINE

Project Advisor	MR. ADEEL ARIF
Status	In Process of Completion

Masjid Online is a complete mobile application intended to support the religious practices of Muslims all-inclusive. Key features include a GPS-powered Masjid Locator to help users find nearby Mosques, highly accurate Prayer Time Reminders, and a Qibla Direction tool. To promote inclusivity, the app provides detailed information on women's facilities and disability-friendly amenities within Mosques. Masjid Online also modernizes the process of booking animal shares for qurbani. Additional features, such as an Islamic Education Hub and a Community Events Calendar, more boost the user experience. Masjid Online aims to be a valuable companion for Muslims, establishing their daily practices and nurturing a sense of community.

1562. FAST E-COMMERCE- EMPOWERING E-COMMERCE START-UPS

Project Advisor	MR. AHSAN AZHAR
Status	In Process of Completion

Fast E-commerce is an innovative web-based application designed to cater to the dynamic needs of fast-paced e-commerce businesses. This cutting-edge platform offers entrepreneurs and start-ups a user-friendly and efficient solution to swiftly establish their online stores without technical complexities. The platform leverages positive testimonials and user-generated content as social proof, which builds trust and validates brand value, thus encouraging new customers to make purchases. By adopting an agile development approach and featuring an intuitive interface, Fast E-commerce aims to revolutionize how entrepreneurs embark on their e-commerce journey, providing a competitive edge to aspiring ventures in the online business realm.

1563. WORK MINGLE

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

The Work Mingle web application aims to provide an efficient platform for customers to hire laborers, specifically painters and cleaners, by enabling transparent and flexible fare negotiation. Traditional methods of hiring laborers are often inefficient, lack transparency, and do not allow for competitive pricing. Customers struggle to find trustworthy laborers, while laborers lack a reliable platform to find consistent work. By streamlining the hiring process and introducing a negotiation-based fare system, Work Mingle ensures that customers receive fair pricing and quality service. This platform also empowers laborers by providing them with a steady flow of job opportunities and a transparent way to bid for work.

The development of Work Mingle involves several key knowledge areas. Web development techniques are employed to create a user-friendly and scalable web application. Real-time communication features enable instant messaging between customers and laborers. Geolocation services are integrated to allow for location sharing and distance calculation via Google Maps. Cost Estimation, Reviews and Ratings for the reliability of labors, Secure payment options, including cash on delivery, Stripe are implemented to ensure flexible and safe transactions. Additionally, robust user authentication and authorization processes are put in place to secure user login and verification.

Customers will be able to post jobs, negotiate fares, and ensure secure transactions, while laborers will have access to a consistent flow of job opportunities and the ability to bid competitively. This will lead to increased satisfaction for both parties and a more organized labor market. In summary, Work Mingle addresses significant gaps in the current labor hiring process by providing a transparent, user friendly, and secure platform for both customers and laborers, ultimately benefiting the broader community.

1564. PCGENIUS

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

The rapid growth of technology has led to an unprecedented demand for custom-built personal computers (PCs) tailored to individual needs and preferences. In response to this growing trend, "PC GENIUS" is a revolutionary web-based application that aims to transform the process of building personal computers by offering users an intuitive platform to select, assemble, and visualize their desired configuration. This innovative project combines an extensive database of computer components, advanced 3D modeling, budget-based recommendations, and an easy-to-use interface to simplify and enhance the PC building experience. With PC GENIUS, users can browse through a vast library of computer components, including CPUs, motherboards, RAM, graphics cards, storage devices, and cases, from leading manufacturers. The application's advanced filtering system allows users to narrow down their search based on specific criteria, such as budget, performance, brand, and compatibility. This ensures that users can quickly find the perfect components to meet their unique needs and preferences. The application's 3D modeling capability generates a detailed, interactive 3D model of the custom PC build, allowing users to visualize their PC's layout, cable management, and overall design before making a purchase. The 3D model can be rotated, zoomed, and explored from multiple angles, giving users a comprehensive understanding of their PC's aesthetics and functionality. PC GENIUS also incorporates budget-based recommendations, providing suggestions for alternative components that can help stay within budget or optimize performance. With its user-friendly interface,

extensive resources, and community support, PC GENIUS is the ultimate platform for creating a dream PC.

1565. CULINARY COMMUNITY

Project Advisor	MR. HAROON ABDUL WAHEED
Status	In Process of Completion

In Pakistan, there exists a significant gap in accessing authentic regional recipes and opportunities for home chefs, particularly women, to monetize their culinary skills. To address this problem, we propose a platform that serves as a central hub for sharing authentic recipes, ingredients, and cooking tutorials tailored to diverse regional tastes within Pakistan.

Additionally, the platform provides a marketplace for home chefs to showcase and sell their homemade dishes, empowering them economically and fostering a vibrant community of food enthusiasts, learners, and experienced chefs.

Furthermore, our initiative addresses the prevalent issue of unhygienic food from restaurants by promoting the availability of hygienic homemade meals.

Additionally, we facilitate live chat assistance where novice cooks and individuals encountering culinary challenges can seek guidance and insights related to cooking. This interactive platform enables users to share their queries and receive valuable opinions and advice from experts and fellow community members, enhancing their cooking experiences and knowledge. This initiative aims to revolutionize Pakistanis' engagement with their culinary heritage while enabling home chefs to thrive in the digital age.

1566. VISIONSPHERE

Project Advisor	MR. IMRAN ASHRAF
Status	In Process of Completion

VisionSphere aims to revolutionize the online eyewear shopping experience in Pakistan by introducing an innovative mobile and web application. Traditional eyewear shopping methods often lack convenience and customer satisfaction, especially in remote areas where access to physical stores is limited whereas online shopping platforms face challenges such as limited selection, uncertainty in fit and style, and high return rates, leading to dissatisfaction among users. In response to these challenges, VisionSphere proposes a comprehensive solution leveraging cutting-edge augmented reality (AR) technology and e-commerce capabilities. The application will allow users to virtually try on glasses in real-time, and visualize different styles of frames according to their preferences before purchasing. By integrating a user-friendly interface and a secure payment gateway, VisionSphere aims to enhance the overall shopping experience and foster customer loyalty through a rewards program. Through VisionSphere, users will gain access to a diverse range of eyewear options, facilitated by the seamless integration of AR technology and e-commerce functionalities. The application's focus on user engagement and satisfaction aims to mitigate the challenges associated with online eyewear shopping, ultimately leading to reduced returns and improved customer experience. With a clear vision to transform online eyewear shopping, VisionSphere seeks to address the limitations of existing platforms and redefine the online retail landscape in Pakistan.

1567. EVENTEYES

Project Advisor	MR. IMRAN ASHRAF
Status	In Process of Completion

EventEyes is a mobile app designed to simplify the discovery and enjoyment of local events using GPS technology for real-time, personalized recommendations. It addresses the difficulty of accessing comprehensive, up-to-date event information by consolidating details into a single, user-friendly platform. Integrating mobile app development, GPS, user experience design, and data analytics, EventEyes offers features like in-app ticket purchasing, social media integration, calendar sync, and real-time updates. The app aims to enhance user engagement, increase event attendance, and strengthen community ties.

1568. BE-ZUBAAN: MOBILE APP FOR ANIMAL WELFARE AND MANAGEMENT

Project Advisor	MR. M. FAHAD KHAN
Status	In Process of Completion

"Be-Zubaan" is envisioned as a comprehensive mobile application aimed at promoting animal welfare and facilitating the management of stray animals. By leveraging the power of mobile technology, this application seeks to empower users to locate nearby animal shelters, report instances of stray or deceased animals on public roads, and contact municipal committees for assistance. Additionally, "Be-Zubaan" aims to serve as a marketplace for individuals to buy, sell, or adopt pets, while also providing essential services such as virtual health assistance and access to a virtual doctor service for pet owners. Furthermore, the platform will feature an online pet shop where users can purchase a variety of pet-related products. Through these features, "Be-Zubaan" endeavors to provide a user-friendly interface for individuals, shelters, and municipal committees, ultimately fostering responsible pet ownership and promoting animal welfare in communities.

1569. MY BUCKET: AN INNOVATIVE AUTOMATED PARCEL DELIVERY SYSTEM

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

"My Bucket" is an innovative system designed to simplify and secure parcel deliveries using IoT technology and a user-friendly web application. Traditional delivery methods often lead to missed deliveries and package theft because they require customers to be present at specific times. "My Bucket" addresses these issues with a smart, locked bucket placed near customers' doors. This bucket remains locked until a parcel arrives, ensuring the security of the package without needing the customer to be home.

The significance of this project lies in its potential to solve common problems in parcel delivery: missed deliveries, the cost and delay of redelivery attempts, and the growing threat of package theft, especially in urban areas. By providing a secure and convenient delivery system, "My Bucket" can enhance the efficiency and reliability of parcel services.

Key knowledge areas for this project include IoT technology, software and mobile app development, GPS tracking, and secure communication protocols. Integrating these areas will enable the creation of a smart bucket that can communicate with both the delivery personnel and the customers.

The expected results include a reduction in missed deliveries, improved parcel security, optimized delivery routes, and a better user experience. Ultimately, "My Bucket" aims to set a new standard for secure and efficient parcel delivery, benefiting both customers and delivery services.

1570. ARCHITECTURAL CRAFT

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

In Pakistan, when people build houses, they usually pick designs from books, but they often don't like how they look in real life. Our solution lets people create and see their own designs before making a final decision. This saves time and money by avoiding disappointment and wasted effort. With our user-friendly app, people can easily customize their window grills, see how they'll look, and know the cost before ordering. By offering this flexibility, we aim to make homeowners happier and construction projects more efficient.

1571. THE COMMUNITY LINK

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

The Community Link project aims to solve the problem of people feeling disconnected and local services being inefficient in their communities. Many communities face issues like isolation, lack of involvement, and poor management of services, which can weaken community ties and lead to wasted resources. This project plans to create a platform that helps people communicate better, manage waste efficiently, support local businesses, and keep children safer at school. The project is important because it can improve community well-being and make services more effective. A connected community with organized services can bring residents closer, boost local businesses, and ensure a safer environment for everyone. The project utilizes expertise in web and mobile development, real-time communication, and secure biometric technology. The final product will be an easy-to-use website and mobile app that help people stay engaged with their community, manage waste collection, find and support local businesses, get real-time updates on school attendance, and stay informed about community projects and budgets. By using technology, The Community Link will create a more connected, efficient, and safer community.

1572. BARBER & BEAUTY SERVICES

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Our project is to create a mobile app that makes it easy for people to get grooming services at home. Many people are too busy or have trouble getting to a salon because of mobility issues or disabilities. Going to a salon can take a lot of time and be uncomfortable, especially during times like the global pandemic.

This project is important because it helps people take care of themselves and feel good about how they look. The app will use skills in mobile app development, user login security, booking and tracking systems, and chat features to make the experience smooth and easy. It will also have a marketplace where users can buy grooming products.

The goal is to build a simple, user-friendly app that offers grooming services for both men and women, keeps user information safe, shows service history, and lets users book and track service providers in real-time. By solving the problems of accessing grooming services, we hope to change the grooming industry and make life better for our users.

By leveraging mobile technology, we aim to revolutionize the grooming industry, making it more convenient, inclusive, and personalized. The project will utilize knowledge areas such as mobile app development, secure user authentication, user experience design, and real-time tracking systems. The end result will be a user-friendly app that enhances the overall grooming experience, improves user well-being and confidence, and provides a one-stop solution for grooming services and products.

1573. BUZZ SERVICES

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Buzz Services is an innovative web-based platform designed to revolutionize customer service management and asset tracking for organizations. The primary problem addressed by this project is the inefficiency and fragmentation often found in handling customer service requests and managing organizational assets. The significance of this problem lies in its impact on customer satisfaction, operational efficiency, and overall business performance.

Buzz Services will integrate multiple functionalities into a single, cohesive application. These functionalities include a sophisticated ticketing system for managing customer inquiries and service requests, an asset management module for tracking and maintaining organizational assets, project management tools for coordinating and overseeing projects, workload management for optimizing resource allocation, a knowledge base for information sharing, a feedback survey tool for gathering customer insights, and a customer portal for direct interactions.

The project leverages advanced algorithms and state-of-the-art technologies to ensure the system is scalable, secure, and user-friendly. The expected results include a significant reduction in response times to customer inquiries, improved asset utilization, automated routine tasks, and enhanced customer satisfaction. By providing a unified platform that integrates these functionalities, Buzz Services aims to outperform existing solutions in the market, offering better user experience and operational efficiency.

1574. PRESENTPRO.AI

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

PresentProAi addresses the pressing need for a user-friendly platform to enhance presentation skills by leveraging advanced Natural Language Processing (NLP) techniques. The project arises from the recognition of the widespread lack of confidence in presentations, hindering both personal and professional growth. Drawing from NLP algorithms, PresentProAi offers real-time analysis of users' recorded presentations, evaluating crucial aspects such as speaking rate, pauses, tone, sentiment analysis, and pitch. This analysis enables the platform to provide personalized feedback, empowering users to refine their delivery and overcome common presentation challenges.

The significance of this project lies in its potential to bridge the gap between desire and proficiency in effective communication. In today's communication-centric world, the ability to articulate ideas confidently is paramount, yet many individuals struggle to develop this skill due to limited access to effective practice platforms. PresentProAi seeks to fill this void by providing a convenient and accessible solution that caters to users' diverse needs and skill levels.

Key knowledge areas utilized in this project include NLP, web application development, user experience design, and data privacy and security measures. By integrating these areas of expertise, PresentProAi aims to deliver a seamless and enriching experience for users seeking to enhance their presentation skills.

The results expected from PresentProAi encompass not only improved presentation skills among users but also increased confidence and proficiency in articulating ideas effectively. Through features such as progress tracking, performance evaluation, and the option to connect with professionals for guidance, PresentProAi endeavors to facilitate continuous improvement and personalized learning experiences for its users.

In summary, PresentProAi represents a timely and impactful initiative to address the pervasive challenge of presentation skills development. By harnessing the power of NLP and user-centric design principles, this project aims to empower individuals to communicate confidently and effectively in various personal and professional contexts.

1575. IMTIHAAN

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Imtihaan is a revolutionary centralized platform meticulously crafted to redefine the landscape of exam preparation for students across a myriad of academic domains. Traditional methods of exam readiness often leave students grappling with a multitude of challenges, including fragmented resources, inadequate interactive tools, and a conspicuous absence of personalized guidance. Recognizing these impediments as formidable barriers to academic excellence, Imtihaan emerges as a beacon of hope, offering a comprehensive array of cutting-edge features meticulously designed to alleviate these burdens and empower students on their educational journey.

At the heart of Imtihaan lies an impressive suite of tools and functionalities meticulously tailored to meet the diverse needs of students. The platform boasts a robust Lecture Review Generator, a sophisticated Mock Exam Simulator, and an intuitive Performance Tracking Tool, each engineered to streamline study processes and optimize learning outcomes. Additionally, Imtihaan offers Collaborative Study Spaces, providing students with a virtual environment conducive to peer collaboration and knowledge sharing. The Resource Library serves as a treasure trove of curated study materials, while Progress Analytics offers invaluable insights into individual learning trajectories.

Leveraging advanced technologies such as Artificial Intelligence (AI) and Optical Character Recognition (OCR), Imtihaan transcends traditional boundaries to provide students with a truly personalized learning experience. The platform's AI-Powered Recommendations harness the power of machine learning algorithms to deliver tailored study plans and resource suggestions, while OCR technology seamlessly converts handwritten notes into editable, shareable content, enriching students' study repertoire.

Imtihaan also champions inclusivity and accessibility, ensuring that students of all backgrounds and abilities can benefit from its myriad offerings. Real-time Updates keep students informed of course announcements and changes, while stringent Security Measures safeguard user data and privacy. Additionally, Imtihaan hosts Competitive Mock Exams, allowing students to test their knowledge on a global stage and vie for prestigious awards and discounts.

By fostering a culture of collaboration, innovation, and continuous improvement, Imtihaan aspires to transcend the confines of traditional exam preparation platforms, ushering in a new era of academic excellence and empowerment. Through its unwavering commitment to student success, Imtihaan seeks not only to revolutionize exam preparation but also to inspire a lifelong love of learning among students worldwide.

1576. SMARTCOMMERCE: YOUR PERSONALIZED MARKETPLACE

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	In Process of Completion

SmartCommerce is an innovative e-commerce platform designed to revolutionize traditional buying and selling methods through advanced technology. It focuses on creating distinct accounts for buyers and sellers to promote an efficient and dynamic marketplace. The core feature allows buyers to upload images of desired products, which are analyzed by an AI algorithm to present similar items available

on the platform. Sellers are notified of these uploads and can submit personalized offers, including product images and pricing, based on the buyer's specified budget. This system ensures a seamless experience for both buyers and sellers by leveraging AI for personalized recommendations and streamlined order fulfillment.

1577. CABBIE THE CABBAGE

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

Cabbie's Quest is a 2D action platformer that invites players on a nostalgic journey through visually diverse worlds filled with challenging platforming levels and quirky characters. In this game, players assume the role of Cabbie, a courageous cabbage with a mission, who must navigate through 20 levels of platforming goodness while combating enhanced AI enemies. What sets Cabbie's Quest apart is the ability for players to choose from five unique characters, each equipped with distinct weapons, offering diverse playstyles and strategic depth. The significance of this project lies in its commitment to delivering a classic platformer experience with responsive controls, tight level design, and a variety of challenges. By incorporating a range of characters with their own specialized weapons, players are empowered to tackle obstacles in creative ways, enhancing replay value and player engagement. The inclusion of animated meat creatures as enemies adds a humorous and unexpected twist to the adventure, further enriching the gameplay experience. Knowledge areas utilized in this project include game design, level design, character design and AI programming. Through meticulous attention to detail and a focus on delivering an immersive and enjoyable gameplay experience, Cabbie's Quest aims to captivate players with its engaging gameplay mechanics and nostalgic appeal.

1578. WEAR GALAXY: FASHION REIMAGINED WITH AR MAGIC

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

WeAR Galaxy is an innovative mobile application designed to transform the eyewear shopping experience by leveraging the power of augmented reality (AR) and artificial intelligence (AI). The application allows users to virtually try on glasses in real-time, providing an immersive and interactive experience. By utilizing AI, the app offers personalized frame recommendations based on the user's unique facial features, ensuring that each user receives suggestions tailored to their specific needs and preferences. This combination of AR and AI technology aims to bridge the gap between online and physical store experiences, enhancing user satisfaction and confidence in their eyewear purchases. The significance of this project lies in its potential to set new standards in the mobile eyewear market by offering a seamless, interactive, and highly personalized shopping experience directly from users' mobile devices. Traditional eyewear shopping applications often fall short in delivering the personalized and engaging experience found in physical stores, leading to user uncertainty and dissatisfaction. WeAR Galaxy addresses these challenges by enabling users to visualize how different frames will look on them without leaving the comfort of their homes, thus increasing the likelihood of making confident and informed purchase decisions. The project draws upon a diverse range of knowledge areas, including computer vision for accurate facial recognition and feature analysis, machine learning for developing the AI-powered recommendation system, mobile app development for creating a smooth and intuitive user interface, augmented reality for real-time virtual try-ons, and 3D modeling for rendering realistic glasses frames. Tools such as Figma are used for UI/UX design, Android Studio for developing the Android version of the app, TensorFlow Lite for implementing AI algorithms, and ARKit for integrating AR capabilities. The expected outcomes of WeAR Galaxy include improved user satisfaction due to the personalized and interactive shopping experience,

increased user engagement as users spend more time exploring different frames and recommendations, and higher conversion rates as users feel more confident in their purchases. By setting new standards in personalized shopping experiences and driving innovation in the eyewear industry, WeAR Galaxy aims to position itself as a leader in the mobile eyewear market. The project is poised to significantly enhance how users shop for eyewear, providing a convenient, efficient, and enjoyable shopping experience that aligns with the modern consumer's expectations.

1579. INTELLIGENT EVALUATION AND FEEDBACK PLATFORM

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

Our project the Intelligent Evaluation and Feedback Platform addresses the critical need for effective feedback mechanisms in Information Technology & Computer (ITC) and Programming Fundamentals (PF) education. By leveraging advanced technologies such as machine learning, React.js, Node.js, MongoDB, and integrating with the ChatGPT API, the platform aims to automate evaluation processes, provide detailed feedback, and enhance the overall learning experience for students and teachers.

1580. CAPTION FLOW PRO: MANAGE CONFERENCE MEETINGS

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

CAPTION FLOW PRO is an all-inclusive web-based tool that enables the enhancement of communication in educational facilities. It is helpful in generating meeting minutes, bridging communication, and has spam control as well as microphone disablement, thus professionalism. The purpose of the project is to help promote an atmosphere of improved openness and responsibility for educational processes as well as increasing organizational effectiveness.

1581. MEDCONNECT

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

The MedConnect project aims to tackle inefficiencies in patient-doctor interactions by addressing prolonged appointment wait times, fragmented medical records, and inconsistent communication. This digital platform leverages AI and machine learning to streamline appointment management, enhance real-time communication, and personalize patient care, ultimately reducing operational bottlenecks and improving diagnostic accuracy. MedConnect prioritizes stringent security measures to protect health data, adhering to regulations like HIPAA. By transforming traditional healthcare into a more efficient, accessible, and patient-centric system, MedConnect aspires to reduce wait times, increase record accuracy, and enhance patient outcomes, setting new standards in healthcare efficiency and satisfaction.

1582. SMART COMMUNITY LIVING

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

The Smart Community Living project aims to transform residential community management through an integrated platform that enhances communication, task allocation, billing transparency, employee
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salary management, and user experience for residents, administrators, and maintenance personnel. Traditional management systems, with their fragmented processes and manual interventions, often lead to delays, miscommunications, and a lack of transparency, frustrating residents and burdening administrators. Our project addresses these inefficiencies by providing a unified solution that automates routine tasks, facilitates clear communication, and ensures accountability in financial transactions.

Key components of the project include the admin panel, user interface, worker management system, and employee salary module. The admin panel empowers administrators to efficiently manage community activities such as event scheduling and task assignments, ensuring real-time oversight and swift issue resolution. The user interface offers residents a seamless experience for submitting maintenance requests, accessing billing information, participating in surveys, and receiving notifications, fostering active community engagement. The worker management system enhances task allocation and tracking, allowing maintenance personnel to update task statuses and report completions efficiently. The employee salary module streamlines salary calculations, payments, and record-keeping, ensuring timely and accurate compensation for all staff members.

By leveraging technology to create a comprehensive management solution, the Smart Community Living project aims to improve residents' quality of life, administrative efficiency, and overall community connectivity, setting a new standard for residential community management.

1583. JOBNEST

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

This project aims to revolutionize the job application process by leveraging artificial intelligence (AI) for resume customization and job filtering within a comprehensive CV/resume builder and job application platform. The system will feature three primary components: an employee interface for creating and tailoring resumes, browsing job listings, and submitting applications; an employer interface for posting jobs, managing applications, and communicating with candidates; and an admin dashboard for overseeing system operations and addressing user queries. By integrating AI-driven features, particularly in resume customization and job filtering, the platform will streamline the application process and enhance communication between job seekers and employers.

1584. FINDEASE

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

The "FindEase" project addresses the significant issue of lost item recovery in densely populated areas where traditional methods are inefficient and time-consuming. This project aims to develop a community-centric platform that streamlines the process of reporting and recovering lost items, leveraging modern web technologies and fostering community engagement. "FindEase" provides a user-friendly mobile application that facilitates quick and secure reporting of lost items, advanced search functionalities, and a robust system for matching found items with their rightful owners. By implementing phone number verification for secure user authentication, the platform ensures trust and safety. Users can report lost items by providing detailed descriptions and selecting categories, search for lost items using various criteria, report found items, and claim items that match their reported lost items. Additionally, the system sends real-time notifications to users about the status of their reports and claims, further enhancing the user experience.

The significance of the problem lies in the high frequency of lost items in densely populated regions, causing inconvenience and potential financial loss to individuals. "FindEase" aims to mitigate these

issues by offering a streamlined recovery process that saves time, reduces stress, and promotes a sense of community responsibility and trust. The project will utilize front-end development with React Native for a responsive user interface, back-end development with Django REST Framework for server-side logic and database interactions, and robust security measures to ensure user data privacy. The anticipated results include improved rates of lost item recovery, enhanced community engagement, and a technologically advanced approach to addressing the common issue of lost items. By fostering a culture of mutual assistance and trust, "FindEase" aims to make a positive social impact and significantly reduce the inconvenience and financial loss associated with losing personal belongings.

1585. WHISPERS IN THE SHADOWS

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

"Whispers in the Shadows" is a spooky 3D game made with Unity. You play as Hamza, an investigator trapped in a haunted house filled with dark secrets. Your main goal is to solve puzzles and avoid ghosts while exploring the eerie surroundings. Throughout your investigation, you will find hints that can help you escape the house. However, beware of the ghost that haunts the place. Its mission is to kill anyone inside and prevent their escape. The ghost can appear from any direction, so you will need to be vigilant and find places to hide. The game features creepy sound effects and lighting to create a terrifying atmosphere, making you feel like you're in a real horror movie. As you navigate through the haunted house, you will uncover its mysteries, face challenges, and strive to survive the horror house.

1586. INSIGHT-MATE

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

Insight Mate is an innovative mobile application designed to provide comprehensive assistance and support for individuals with visual impairments. The project addresses the critical challenges faced by blind individuals in navigating their surroundings, identifying objects, and performing daily tasks independently. By leveraging advanced technologies such as artificial intelligence (AI), image recognition, and voice interaction, Insight Mate aims to enhance accessibility and improve the quality of life for visually impaired users. The primary focus of Insight Mate is to empower blind individuals with comprehensive navigation capabilities, object recognition functionalities through a user-friendly mobile interface. The application integrates a small, external IP-based camera to capture real-time images, which are then processed using MI algorithms to identify objects, read text, and provide contextual information. Additionally, Insight Mate features robust navigation support through Mapbox, offering turn-by-turn directions to ensure safe and efficient travel. The significance of Insight Mate lies in its potential to address the day-to-day challenges faced by visually impaired individuals, including difficulties in wayfinding, shopping, and social interactions. By harnessing the power of AI and modern mobile technologies, Insight Mate offers a holistic solution that promotes independence, safety, and inclusion for users with visual impairments. The application also includes features such as currency recognition, facial recognition, emergency assistance, and shopping assistance, all of which are accessible through intuitive voice commands. Key knowledge areas utilized in the development of Insight Mate include mobile app development, AI and machine learning, computer vision, and human-computer interaction. Through collaborative efforts in software engineering, data analysis, and user experience design, the project aims to achieve tangible results in the form of a functional and impactful mobile application tailored to the needs of blind users. Insight Mate not only aspires to be a practical

tool for its users but also aims to set a precedent for future innovations in accessibility technology, contributing to a more inclusive society.

1587. OCCASIONEASE

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

The project entails the creation of a centralized booking platform designed to streamline the organization of diverse services for events like weddings, parties, and corporate gatherings. Through this platform, users can effortlessly secure bookings for beauty parlors, salons, marriage halls, photographers, price range adjustment, Weather details and catering services (Asian/Western), consolidating all arrangements into one convenient location. By offering a user-friendly interface accessible via mobile devices, the platform aims to simplify the booking process, eliminating the need for manual coordination and extensive research. Key features include comprehensive service listings, intuitive search and filtering options, seamless booking management, and secure payment integration. Through feedback and rating systems, users can provide valuable insights while aiding others in making informed decisions. On price range page we can filter custom services by using machine learning algorithms. The platform's development will prioritize scalability, ensuring it can accommodate future enhancements and additional service categories. Ultimately, this project seeks to revolutionize event planning by providing a centralized hub where users can easily discover, book, and manage essential services, thereby enhancing the overall experience of organizing memorable events.

1588. NEXGEN CONNECT (A CRM TOOL)

Project Advisor	MS. SAIRA LATIF
Status	In Process of Completion

NexGen Connect is a dynamic Customer Relationship Management (CRM) web application aimed at streamlining the management of customer interactions and data. The project leverages modern web technologies to offer an intuitive and efficient user experience. By integrating various customer touchpoints, NexGen Connect helps businesses enhance their customer service, improve satisfaction and drive growth.

1589. AGROPULSE

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

AgroPulse aims to revolutionize farming by integrating technology into traditional agricultural practices. This platform offers weather forecasting, an auction marketplace for agricultural goods, expert consultations, and rental machinery services. By addressing challenges such as weather uncertainties, inefficient resource utilization, and limited access to expertise and equipment, AgroPulse seeks to enhance farmers' productivity and profitability. Utilizing weather APIs, e-commerce functionality, and expert consultations, AgroPulse provides farmers with real-time data, market access, and expert guidance, ultimately leading to improved crop yields, enhanced resource utilization, and increased profitability.

1590. VEHICLE MAINTENANCE AND TRACKING APP

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

In the dynamic landscape of software development, efficient vehicle maintenance and tracking is a significant challenge for both individual vehicle owners and fleet managers. The traditional manual methods of tracking maintenance schedules, expenses, and vehicle performance are error-prone and inefficient, leading to increased operational costs, missed maintenance tasks, and potential safety risks. This project aims to develop a comprehensive vehicle maintenance and tracking app that integrates maintenance scheduling, expense tracking, GPS location services, and user-friendly interfaces into a single, cohesive platform.

The project will leverage a variety of knowledge areas, including mobile app development, backend infrastructure, database management, GPS integration, and user interface design. The development stack will include technologies such as Java / Kotlin and Swift for native mobile development, or React Native/Flutter for a cross-platform approach. The backend will utilize Node.js with Express.js, along with cloud services like Firebase or AWS for data storage and authentication. SQLite and MongoDB/PostgreSQL will be employed for database management, and Google Maps API will be used for GPS and location services.

The expected results of this project include a robust, user-friendly app that provides seamless vehicle maintenance tracking, real-time alerts for upcoming maintenance, comprehensive expense tracking, and optimized routing for fleet management. The app will also offer document management features, allowing users to store and access important documents digitally. By delivering these functionalities, the app aims to improve operational efficiency, enhance safety, and provide valuable insights for vehicle owners and fleet managers.

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1591. ADVENTURE ACADEMY: QUEST FOR KNOWLEDGE

Project Advisor	DR. ADNAN GHAFOOR
Status	In Process of Completion

Adventure Academy: Quest for Knowledge is an educational game designed for primary school students (ages 6–12). The game is set in EduRealm, a magical world where players embark on an adventure to retrieve the "Scrolls of Knowledge" stolen by Dr. Ignorance. The project integrates math, science, and general knowledge into interactive mini-games, utilizing gamification elements to enhance learning. The game also includes a parental monitoring system to track progress and adjust difficulty levels.

1592. FOOD REVIEW-BASED RESTAURANT RECOMMENDER SYSTEM

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

The Food Reviews-Based Restaurant Recommender System is a web-based application designed to provide personalized restaurant suggestions by leveraging user profiles and external reviews from platforms like Yelp and Google Reviews. The system will use web scraping and machine learning algorithms, such as collaborative filtering and sentiment analysis, to make restaurant recommendations.

based on user preferences and past behavior. To ensure scalability and real-time updates, an efficient server infrastructure (such as AWS EC2 or Google Cloud Compute Engine) will be used, capable of handling large-scale scraping tasks and managing real-time data flows. The system will be continuously updated as new reviews and user data become available, making future recommendations more accurate. Additionally, users' personal reviews will be incorporated into the recommendation process, improving the system's personalized approach.

1593. WATCHFULLY SENTRY

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

The goal of the AI-powered intelligent surveillance system is to address the issue of physical inspection by utilizing AI technology. Conventional surveillance techniques are ineffective, have a narrow scope, and are subject to human mistake. In order to track and validate detection, the project incorporates YOLOFace for face detection, ArcFace for face recognition, and other AI models for object detection and body estimation. In order to identify unregistered users, detect unauthorized activity, and flag questionable activity, the system analyzes live footage from the camera. It improves the reliability and safety during testing while relieving staff of some of their workload by providing real-time notifications from the client interface. Real-time application development, computer vision, and machine learning are examples of core competencies. A reliable, effective, and expandable monitoring system is the anticipated outcome.

1594. NUTRIVISION: PERSONALIZED DIET PLANNING WITH IMAGE PROCESSING

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

The project focuses on developing a personalized diet planning web application with the help of AI. The application uses image processing technology to estimate body measurements and health indicators, to provide customized diet plans. By combining user-provided data, such as age, weight, and dietary preferences, the system generates highly customized diet plans according to individual needs. Additionally, the project analyzes the limitations of current diet planning technologies.

1595. AUDIO DIARY, CATEGORIZES ON EMOTIONS

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

The idea behind the project that follows is called Audio Diary Categorized by Emotions, which is an application that would record audio entries like a diary yet categorize them according to the emotions the user is perceived to have like happiness, sadness, anger and the likes. The diary will transcribe the audio recordings into text as well as utilize the timbre of the speaker's voice to classify emotions correctly. This application goes beyond transcribing speech into text and even smartly categorizes entries based on the identified mood of the user, helping to gain a better understanding of their mood. Also, the diary can store voice records as well as time stamps so that user can be able to search for entries from a specific date. It is vital to note that the project brings central knowledge domains like tone recognition and such to create an effective emotional monitoring solution. This tool is designed to support the reflection process and to help users to record their feelings and moods in order to track their improvement over time.

1596. VIRTUAL REALITY MOVIE PLAYER

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

The **Virtual Reality Movie Player** is a web-based application designed to enhance the movie-watching experience by allowing users to engage in synchronized playback of videos through shared links in a virtual cinema environment. This platform addresses the limitations of traditional streaming services, which often lack social interactivity. By integrating features such as real-time chat, user reactions, a lounge for discussions before or after the movie, and an AI-driven recommendation system based on user profiles and viewing history, the platform fosters a more engaging and interactive movie-watching experience. The project leverages technologies such as WebRTC and WebSocket for real-time communication, ensuring a seamless experience across devices. The expected outcomes include a fully functional virtual cinema that meets user needs for social interaction and personalized content recommendations.

1597. PHISHING AND FAKE VIDEO DETECTION

Project Advisor	DR. IRFAN ANJUM
Status	In Process of Completion

We are developing a web service aimed at protecting women from cyber threats, such as fake videos and phishing attacks. This online application will utilize a hybrid machine learning model for the detection and analysis of misleading content, featuring a CNN+RNN hybrid model for phishing detection, a CNN+RNN+PPG hybrid model for fake video detection, and a CNN+RNN model for fake audio detection. The system will extract audio from uploaded videos to assess authenticity, integrating these audio results with visual analysis to provide a comprehensive evaluation. Additionally, the platform will offer guidance and legal support for victims, reinforcing our commitment to creating a robust defense against digital deception and cybercrime. Ultimately, our goal is to enhance the online safety and experience for women.

1598. KUSHTI

Project Advisor	DR. IRFAN ANJUM
Status	In Process of Completion

This project focuses on the development of a digital simulation of Kushti, Pakistan's traditional wrestling, which is currently losing attraction in the modern world. The main problem addressed is the lack of a platform that preserves the sport's cultural heritage while appealing to a modern audience. By developing a realistic Kushti game, the project aims to recreate authentic wrestling experiences with features like AI-driven opponents, character customization, and various game modes (training, tournaments, and story mode).

Key knowledge areas include game development, AI for opponent behavior, and 3D animation for wrestling moves. The results aim to deliver an engaging gaming experience that not only entertains but also educates players on the cultural significance of Kushti. By integrating traditional sport with modern gaming mechanics, this project will preserve the essence of Kushti while providing a unique, immersive experience for both local and global audiences.

1599. CUSTOM KICKS

Project Advisor	DR. IRFAN ANJUM
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Status	In Process of Completion
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Custom Kicks project aims to revolutionize how customers shop for and design shoes by providing a highly interactive online platform. This platform will allow users to design their own shoes by uploading images, selecting materials, colors, and other components, and viewing a real-time preview of their custom footwear. By utilizing modern web technologies like React.js for the frontend and Node.js for the backend, the platform will offer a seamless experience across web and mobile platforms.

Our approach gives customers complete control over the design process, from selecting the type of shoe to the smallest details like stitching patterns and logos. Users can upload images that inspire their designs, and the system will translate these visual elements into customizable options for the shoes. Unlike traditional platforms that limit customization, **Custom Kicks** provides a comprehensive design experience that includes saving designs for future modification, easy order placement, and order tracking through a user-friendly dashboard. The project will cater to creative customers seeking unique, personalized footwear options.

1600. RECITE RIGHT

Project Advisor	DR. MOHSIN ASHRAF
Status	In Process of Completion

Recite Right is a web-based application that helps Hafiz-e-Quran to improve their Quran recitation accuracy. The main difficulty experienced by Hafiz-e-Qurans is finding someone to provide feedback during recitation. To solve this, Recite Right aim uses AI powered speech recognition as well as natural language processing to identify mistakes in real time and give instant feedback. This tool provides users with a convenient and flexible way to practice their recitation at any place and time, and improves their recitation skills greatly. To provide features like, Mistake detection, Similar Verse Search, Quran memorization tests, and progress tracking, Recite Right integrates front end, back end & AI technologies. The ultimate task of this project is combining machine learning, software engineering, and web development to build a user-friendly solution which supports continuous learning and improvement.

1601. INTELLICART ENHAANCING ONLINE USER EXPERIENCE WITH AI TECHNIQUES

Project Advisor	DR. MUHAMMAD UMAIR (NEW)
Status	In Process of Completion

The AI-powered e-commerce project, IntelliCart, aims to revolutionize online shopping by integrating advanced artificial intelligence (AI) and machine learning (ML) techniques with robust web development. IntelliCart offers AI-driven product recommendations, automated customer support via AI-driven chatbots, smart inventory management through demand forecasting, and a user rating and feedback system to continuously ensure service quality. Key features include personalized recommendations, visual search through image uploads, search functionality based on product features, 24/7 chatbot assistance that allows users to track orders and request support, and a feedback system to gather user opinions and improve services. These tools aim to boost user engagement and streamline business operations. IntelliCart is designed to provide a more personalized, efficient, and responsive shopping experience for both customers and businesses, especially smaller ones without access to advanced systems.

1602. INTELLIGENT RESUME MANAGEMENT SYSTEM

Project Advisor	DR. MUHAMMAD UMAIR (NEW)
Status	In Process of Completion

The **Intelligent Resume Management System (IRMS)** is designed to automate the process of resume screening and ranking, leveraging advanced **Natural Language Processing (NLP)** and **Machine Learning (ML)** techniques. This system addresses the inefficiencies of manual recruitment by analyzing resumes and job descriptions to rank candidates based on their relevance to specific job roles. Its ultimate goal is to streamline the recruitment process, enhance fairness, and reduce human efforts in hiring.

1603. HAIRDISEASEDETECT: DIAGNOSIS AND TREATMENT SUGGESTIONS USING DEEP LEARNING AND COMPUTER VISION TECHNIQUES

Project Advisor	DR. MUHAMMAD UMAIR (NEW)
Status	In Process of Completion

HairDiseaseDetect is a Deep Learning, Computer Vision, and **NLP-based** system designed to diagnose hair loss from scalp and hair images, suggest personalized therapies, offer dietary recommendations, and connect users with relevant medical specialists. The system employs **deep learning models** such as **DenseNet** and **CNNs** to accurately classify hair loss stages, while **NLP** techniques will power user interactions and responses through the dashboard.

The platform will be made available as a **web application**, providing users the flexibility to access the system. The system ranks specialists (dermatologists, trichologists, cosmetic surgeons) based on factors like **experience, proximity, and cost**, and offers consultation options. A progress tracking feature will monitor users' compliance with treatments and diet, sending reminders for adherence.

We will also collaborate with medical specialists for expert validation of the treatments recommended by the system. The system will continuously improve through user feedback and will be trained on additional datasets to ensure accuracy and diversity in results.

1604. AI-VIDEO INTERVIEW SYSTEM

Project Advisor	DR. MUHAMMAD UMAIR (NEW)
Status	In Process of Completion

The AI-Video Interview System (AI-VIS) is an innovative platform designed to revolutionize the interview process by integrating advanced Artificial Intelligence (AI) technologies. Addressing challenges like time inefficiencies, interviewer biases, and inconsistent assessment criteria, AI-VIS provides a structured and objective approach to candidate evaluation.

At the core of the system is its ability to dynamically adapt to the interview process using advanced Natural Language Processing (NLP), Computer Vision (CV), and Deep Learning (DL). Its progressive question generation feature tailors questions in real-time based on candidate responses, enabling a deeper and more personalized evaluation. Simultaneously, AI-VIS analyzes text, voice, and facial expressions to provide comprehensive insights into candidate performance.

The platform features an intuitive interface for HR managers and candidates, streamlining interviews with automated scheduling, real-time assessments, and personalized feedback. By automating tasks and standardizing evaluations, AI-VIS ensures accurate, fair, and efficient hiring while reducing HR workload.

1605. INTELLIGENT CONSUMER TRAFFIC AND SALES ANALYSIS

Project Advisor	DR. MUHAMMAD UMAIR (NEW)
Status	In Process of Completion

This project leverages advanced deep learning and computer vision techniques to analyze customer movement and behavior within supermarket aisles through CCTV footage. By integrating real-time customer traffic data with transactional sales data, the system identifies critical patterns where high foot traffic does not result in proportional sales. The analysis focuses on optimizing operational strategies by recommending improvements in product placement, pricing adjustments, and targeted promotional activities to enhance sales conversion. Additionally, the system provides real-time push notifications for dynamic checkout management during peak shopping hours, ensuring an efficient customer experience. Store managers are empowered with a comprehensive dashboard offering data-driven insights, including the relationship between customer traffic and sales performance, to make informed, actionable decisions. This integrated approach aims to drive retail efficiency, optimize sales opportunities, and improve overall customer satisfaction, creating a more responsive and data-informed operational environment.

1606. EYELINK: ENCHANTING PATIENT-CARE PROVIDER COMMUNICATION VIA EYE-TRACKING

Project Advisor	DR. MUHAMMAD ZUBAIR
Status	In Process of Completion

EyeLink is a comprehensive Python-based application designed to tackle the critical issue of communication barriers faced by patients with severe physical disabilities, such as ALS, quadriplegia, or other mobility-limiting conditions. Traditional communication systems like nurse call buttons or speech-generating devices often fail due to physical constraints or high costs. EyeLink leverages cost-effective, widely available eye-tracking technology to empower patients to communicate their needs effectively using a user-friendly desktop interface.

The system combines cutting-edge computer vision techniques using OpenCV and Dlib libraries to track eye movements in real time. These movements are translated into actionable commands on a desktop application, enabling patients to express essential needs, such as requesting water, medicine, or assistance. A complementary mobile application developed in React Native ensures caregivers receive instant notifications and daily activity reports, facilitating timely and efficient patient care.

Key knowledge areas include computer vision, Python-based GUI development with PyQt/Tkinter, mobile integration using React Native, and backend development through Nodejs and Azure. The final solution is designed to bridge a critical gap in patient-caregiver communication, offering an affordable and scalable alternative to existing systems like Tobii Eye Tech or Neura Links. EyeLink aims to significantly improve the quality of life for patients by providing timely responses to their needs, reducing complications, and enhancing caregiver efficiency.

1607. MY BUILDER PRO

Project Advisor	DR. MUHAMMAD ZUBAIR
Status	In Process of Completion

MyBuilderPro is an advanced mobile and web-based construction management platform designed to tackle the persistent inefficiencies in project management and communication within the construction industry. By integrating cutting-edge ERP tools, the platform offers comprehensive financial and resource management capabilities that streamline day-to-day operations. Its ability to generate detailed

2D architectural plans enhances the planning and visualization processes, while a real-time AI chatbot fosters efficient communication by addressing queries and providing instant support to users.

Key features of MyBuilderPro include automated resource tracking, which ensures that materials and workforce are effectively monitored, minimizing waste and delays. The robust project scheduling module enables construction teams to plan, execute, and oversee projects with precision, ensuring deadlines are met without compromising quality. Additionally, the platform emphasizes seamless client communication across devices, enabling stakeholders to collaborate and access project updates from anywhere.

By focusing on scalability, reliability, and user-friendly design, MyBuilderPro caters to businesses of all sizes in the construction sector. It bridges the gap between traditional management practices and modern technology, fostering a more efficient, transparent, and productive workflow. This holistic approach to construction management not only improves operational efficiency but also enhances client satisfaction by delivering projects on time and within budget.

1608. DEVELOPING AND ARTIFICAL GENERAL INTELLIGENT SYSTEM USING THE ABSTRACTION AND REASONING CORPUS

Project Advisor	DR. MUHAMMAD ZUBAIR
Status	In Process of Completion

The development of Artificial General Intelligence (AGI) remains a critical challenge in artificial intelligence research, particularly in tasks requiring human-like reasoning and adaptability. This project aims to address the limitations of current AI systems, which struggle to generalize to novel problems beyond their training data, by improving performance on the Abstraction and Reasoning Corpus (ARC). The ARC benchmark evaluates AI's ability to solve abstract reasoning tasks that are straightforward for humans but highly complex for machines.

To tackle these challenges, we propose a hybrid AI model that integrates Vision Transformers (ViTs), symbolic reasoning, and meta-learning. ViTs are employed for their advanced pattern recognition and generalization capabilities, pre-trained on foundational datasets like EMNIST to establish core reasoning abilities. Symbolic reasoning modules complement the neural approach by simulating rule-based logic, while meta-learning enhances task adaptability with minimal data. Key strategies include transfer learning, data augmentation, and synthetic data generation to overcome the limited training data provided by ARC.

This project delivers a multifaceted solution, encompassing the development of an AGI model, research publications, and a web-based platform to showcase results. Performance will be evaluated against ARC benchmarks, focusing on generalization and success rates for novel tasks. By advancing methodologies that bridge the gap between narrow AI and AGI, this research contributes to the broader goal of creating systems capable of human-like cognitive reasoning and abstraction, paving the way for future advancements in the field.

1609. HEALTHNEXUS: AI POWERED DIAGNOSTICS AND EQUIPMENT STORE WITH CHAT-BOT

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Access to timely and reliable healthcare remains a significant challenge for individuals in remote areas, those with limited mobility, or people facing socioeconomic barriers. These challenges often result in delayed diagnoses, worsening health conditions, and unequal access to essential medical equipment. This project, HealthNexus, addresses these issues by providing a comprehensive, AI-driven healthcare platform. It allows users to perform virtual health assessments for conditions such as

heart disease, diabetes, and mental health, utilizing cutting-edge machine learning models. Additionally, the platform includes a marketplace to browse and acquire essential medical equipment tailored to user needs.

The project leverages knowledge from multiple domains, including artificial intelligence, data security, web development, and healthcare systems. Secure data handling ensures compliance with privacy regulations, while a user-friendly interface makes the platform accessible to diverse populations. The results aim to empower individuals with greater control over their health, bridging the gap between underserved communities and quality healthcare resources. By combining diagnostics, e-commerce, and personalized recommendations in a single platform, HealthNexus aspires to enhance healthcare accessibility and equity, ultimately improving health outcomes for its users.

1610. AI ARCHITECT

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Abstract gives the summary of your project. You should focus on the problem description, significance of the problem, knowledge areas to be used and the results to be acquired. Make sure it does not turn out to be an introduction to the introduction / background but summarizes the whole project.

1611. VERDICT AI

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Pakistan is ranked **132nd in the Rule of Law Index**, highlighting significant challenges in its justice system. These challenges include **lengthy delays**, a staggering **2.26 million pending cases**, and an overburdened judiciary, making it difficult for people to receive timely justice. Such delays can result in innocent individuals remaining in jail for extended periods and guilty offenders evading swift punishment. These systemic inefficiencies also undermine public trust in the judiciary and place immense pressure on legal resources.

To address these pressing issues, my **final year project**, titled **VERDICT AI**, proposes a solution that leverages **Artificial Intelligence (AI)** and modern technology. **VERDICT AI** is a web-based system designed to act as a judicial assistant, helping to make fair and timely decisions in **criminal cases** such as theft, murder, and dacoity. The system aims to reduce case backlog, improve decision-making speed, and restore trust in the justice process.

VERDICT AI will function by analyzing both sides of a case—arguments and evidence—and determining **guilt or innocence** with impartiality. Additionally, it will recommend appropriate punishments based on legal precedents and the **Pakistan Penal Code (PPC)**. By simulating the role of a judge, **VERDICT AI** will serve as a crucial aid to legal practitioners.

The AI system will rely on a robust **dataset** that includes PPC acts, previous judicial verdicts, and legal principles. Advanced **machine learning algorithms** will be used to process legal arguments, identify key patterns, and generate reliable and accurate decisions. By employing natural language processing (NLP), the system will understand legal documents and interpret complex case details with high precision.

A **user-friendly web interface** will allow users, such as lawyers, judges, and law enforcement personnel, to input case details and receive fast, well-structured results. The platform will offer features like:

- Case Submission:** Users can enter detailed information about a case.
- argument Analysis:** The system will analyze provided arguments.
- Verdict Generation:** AI will deliver a decision and recommend punishment within seconds.
- Review and Updates:** Users can review and update case details as needed.

By integrating technology into Pakistan's judicial framework, **VERDICT AI** has the potential to transform the legal landscape by making justice more **accessible, transparent, and efficient**.

1612. GAME SCOUT MARKETPLACE

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

The Game Scout Marketplace addresses the challenge of navigating an overwhelming number of online gaming options, where price comparisons and detailed game information are often scattered across various platforms. The significance of this problem lies in the lack of a centralized solution that simplifies game discovery while offering cost-effective recommendations.

This project will leverage knowledge in web scraping, data aggregation, natural language processing (NLP), and user interface design to create an intuitive, price-based game recommendation system. The platform will allow users to filter games by price, companies, ratings and other relevant parameters offering a streamlined shopping experience. The integration of a post page will facilitate community engagement, while the chatbot, powered by NLP techniques, will offer customized support for user queries.

Expected results include a user-friendly marketplace that empowers gamers to make informed decisions efficiently, fosters community interaction, and delivers personalized assistance through advanced AI-driven features. This solution will bridge the gap between scattered game data and user convenience.

1613. WORKOUTWISE: SMART FITNESS COMPANION

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

In today's fitness landscape, maintaining proper exercise form remains a critical challenge, particularly for individuals working out independently. The lack of real-time professional guidance often leads to incorrect posture and technique, resulting in reduced workout effectiveness and increased risk of injuries. While personal trainers can provide necessary corrections, their services are often prohibitively expensive and not readily accessible to the general public, creating a significant gap in fitness education and safety. WorkoutWise addresses this challenge by developing an AI-powered mobile fitness application that provides real-time posture correction and personalized workout guidance. The system leverages advanced technologies including computer vision for movement tracking, machine learning for posture analysis, and natural language processing for voice-controlled interactions. By implementing these cutting-edge technologies, the application monitors exercise form, provides immediate feedback, and dynamically adjusts workout plans based on individual progress and performance. The project integrates multiple knowledge areas including artificial intelligence, computer vision, mobile application development, and real-time processing systems to create a comprehensive fitness solution. The expected outcomes include a system capable of real-time posture detection with over 90% accuracy, instant form correction feedback, and personalized workout recommendations. Through React Native for the frontend and Django for the backend, along with PyTorch for AI model implementation, WorkoutWise aims to democratize access to professional

fitness guidance. The solution will make safe and effective exercise accessible to a broader audience at a fraction of the traditional cost, potentially transforming how individuals approach their fitness journey. This project not only addresses a significant market need but also demonstrates the practical application of advanced computing technologies in improving everyday health and wellness.

1614. ECOSCRAP: DIGITAL PLATFORM FOR SCRAP COLLECTION AND RECYCLING

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

The project, EcoScrap: Digital Platform for Scrap Collection and Recycling, aims to create a revolutionary platform that facilitates the buying, selling, and recycling of scrap materials. It addresses inefficiencies in the current manual scrap management processes by employing innovative technologies such as deep learning, geo-location matching, and automated order management. The platform allows users to upload images of scrap materials, which are categorized in real-time using a trained deep learning model. This automated classification simplifies transactions, builds trust among users, and ensures transparency regarding material quality.

EcoScrap also integrates sustainability tracking, enabling users to monitor their contributions to recycling efforts. The platform's secure payment systems, logistics coordination, and notification alerts further enhance user experience. By focusing on environmental sustainability, operational efficiency, and user satisfaction, EcoScrap promotes a greener future while providing economic opportunities for buyers, sellers, and recyclers.

1615. NURTURE: AN AI-BASED WEB APP FOR PARENTING

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

In today's fast-paced world, parents often face challenges in identifying and addressing their children's mental health and developmental needs. Early signs of mental health issues can be subtle and are frequently overlooked, leading to long-term consequences. Despite growing awareness, there is a lack of accessible, data-driven tools to assist parents in understanding their child's emotional, intellectual, and physical well-being. Required knowledge areas are Machine Learning for developing predictive models to assess children's mental health based on parental input. And maybe we use techniques of Natural Language Processing for analyzing textual data from parents' responses for sentiment analysis or pattern recognition. Psychology and Child Development for understanding key mental health indicators and developmental milestones for children under 12. Data Visualization for presenting insights through graphs, charts, and summaries for easy understanding. Database management as we need store and retrieve data securely, including user inputs and model outputs. By taking help from these areas Nurture AI aims to bridge this gap by providing a web-based platform that will evaluate the mental health status of children under 12, based on inputs from parents. By offering actionable insights and recommendations, the system empowers parents to make informed decisions about their child's development.

1616. CHRONIC KIDNEY DISEASE (CKD) PREDICTION USING CLINICAL DATA

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

Chronic Kidney Disease (CKD) is a global health issue that touches millions of people every year. This work fits the current need for effective diagnostic tools that can be integrated into clinical practice without requiring physical intervention through the creation of a web-based application that can predict CKD from CT scan images utilizing Convolutional Neural Networks (CNNs). The system classifies kidney conditions into four categories: Normal, Cyst, Tumor, and Stone, which are trained on the CT Kidney Dataset. Intended to enhance diagnostic accuracy to reduce processing time while making it more accessible, the application allows users to receive real-time predictions through an easy-to-navigate interface. The project combines the state of the art machine learning with healthcare requirements and concerns, guaranteeing applicability across various healthcare contexts and improving scalability, especially within developing countries that face restrictions in terms of resources and accessibility similar to what is witnessed in Pakistan. Through image analyses, it minimizes the human evaluation of images to facilitate the high prevalence of CKD and diagnostic deficiencies in such areas. This brings the expectation of better patient outcome, low cost of diagnosis, and increased organization of the health care delivery system.

1617. VR-ENHANCED HEALTHCARE

Project Advisor	DR. SYED TANWEER SHAH BUKHARI
Status	In Process of Completion

This project aims to revolutionize medical training by integrating *Virtual Reality* (VR) and *Augmented Reality* (AR) technologies. VR will create immersive, lifelike simulations that allow medical staff to practice procedures in a safe, risk-free environment, while AR will provide real-time interactive guidance to support training. The goal is to enhance the skills of healthcare professionals and make the learning process more engaging and effective, overcoming the boredom often associated with traditional training methods. The project also addresses educational disparities by making training accessible to medical staff across regions, especially in areas with limited resources. By utilizing AR/VR, the project reduces training costs by eliminating the need for expensive travel and accommodation for trainers. Ultimately, it aims to improve patient care by offering an affordable, efficient, and engaging training solution for healthcare professionals worldwide.

1618. DYNAMIC PORTAL FOR EDUCATIONAL INSTITUTES

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

The Dynamic Portal for Educational Institutes is a robust web application designed to address the challenges faced by educational institutions in managing their operations. By leveraging modern web technologies, the platform facilitates the creation of customized portals tailored for schools, colleges, and universities. These portals integrate features such as attendance tracking, resource sharing, and administrative management, aiming to streamline educational processes and reduce the reliance on traditional, resource-intensive systems. The platform offers scalability, performance, and user-centric design to address the diverse requirements of students, teachers, and administrators, with a particular focus on the Pakistani educational system.

1619. HEALTHCARE CONNECT

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

Healthcare access remains a critical challenge, particularly for individuals requiring frequent home-based medical care. The traditional healthcare system in Pakistan struggles to bridge this gap, leading to inefficiencies, increased costs, and inconvenience for patients. The *Healthcare Connect* project addresses these challenges by developing a comprehensive platform that integrates real-time service tracking, secure communication, and an intuitive booking system for home-based healthcare.

This report outlines the project's scope, objectives, challenges, and the proposed solution—a three-sided platform comprising a mobile app for patients, a provider app, and an admin web portal. The platform leverages advanced technologies like Flutter for cross-platform development, Google APIs for GPS and location-based services, and AI chatbot integration for medical guidance. The product also includes innovative features such as OCR for medical document management and secure payment gateways, ensuring a seamless and secure user experience. Through an analysis of existing platforms like Oladoc, Zocdoc, and Uber Health, this report identifies a significant gap in delivering end-to-end home healthcare services. By addressing this gap, *Healthcare Connect* aims to enhance patient satisfaction, simplify logistics for healthcare providers, and contribute to a more accessible and equitable healthcare ecosystem in Pakistan. The project further emphasizes secure data management, real-time interactivity, and effective project deployment to ensure high usability and reliability.

1620. PAWS & TRAILS: ALL-IN-ONE PET CARE SOLUTION

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

The pet care sector is expanding, but because of the market's fragmentation, pet owners have difficulty obtaining thorough and trustworthy services. To address this, Paws & Tails: All-in-One Pet Care Solution provides a centralized online platform where customers can locate services including breed detection driven by artificial intelligence, pet sales, adoptions, veterinarian treatment, and grooming. This integration streamlines pet ownership by enabling consumers to handle all pet-related requirements on a single platform effectively. To produce a smooth and scalable solution, the project makes use of technologies like HTML5, React.js, Node.js, and MongoDB. Paws & Tails wants to provide access to top-notch pet care services and create a welcoming community of pet lovers by encouraging ethical pet ownership and improving customer convenience.

1621. OMNIREACH: UNIFIED SOCIAL MEDIA CUSTOMER SUPPORT PLATFORM

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

OmniReach is a web-based application that revolutionizes customer support by centralizing interactions from social media platforms like Instagram and Facebook into a unified interface. With the growing presence of retail companies on social media, managing customer interactions across various channels has become increasingly challenging, leading to delayed responses and inefficiencies. OmniReach aims to address these issues by integrating major social media platforms Facebook and Instagram to aggregate comments and direct messages. The platform will utilize a robust backend system with technologies like MongoDB, and RabbitMQ to ensure seamless data handling and efficient task distribution. The primary feature of OmniReach is its ability to automate message distribution and real-time task reassignment, enhancing customer support by ensuring that no query goes unnoticed. This system will help improve response times, increase customer satisfaction, and ultimately enhance the company's brand reputation using the platform. The project also involves the development of a responsive front-end interface in React, designed to provide a user-friendly

experience for customer support teams, making it easier for them to manage interactions and provide timely responses. OmniReach offers a comprehensive solution that streamlines operations and by consolidating Instagram and Facebook interactions into one dashboard. This innovative approach will significantly benefit retail companies by optimizing their social media customer service processes, reducing operational costs, and improving overall customer engagement. The implementation of OmniReach is expected to set a new standard in customer support solutions, making it an essential tool for businesses looking to enhance their social media presence and customer service efficiency.

1622. AI-DRIVEN MULTI-MODEL CLASSIFICATION SYSTEM FOR DETECTING RETINOPATHY OF PREMATURITY IN INFANTS

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

Retinopathy of Prematurity (ROP) is a critical eye disease affecting premature infants, often leading to blindness if not diagnosed and treated promptly. Current diagnostic methods are limited by their variability in resources and expertise among ophthalmologists. In the case of AI-based solutions, the focus is either on disease detection on a broader scale or on specific isolated symptoms. To address these challenges, we propose AI-ROP, an advanced AI-driven system designed to enhance the early detection and diagnosis of ROP through a multi-level classification approach. This system leverages deep-learning algorithms to enhance fundus images using image processing techniques, detecting and classifying key retinal changes such as abnormal blood vessel growth and retinal detachment into types (Type-1, Type-2, and RD). This innovation aims to bridge the gap in ROP diagnosis, particularly in resource-limited settings, and support clinicians in making informed decisions, ultimately improving patient results and reducing the risk of blindness in affected infants.

1623. BARGAIN N BUY

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

Bargain N Buy is a web application for the car market, addressing inefficiencies in the buying and selling processes. The platform offers innovative features such as an AI chatbot, a price calculator, a dealer live portal, and a bidding system. Additionally, it integrates a chatbot to assist users. The project aims to revolutionize the car market by eliminating intermediaries, ensuring transparency, and enabling real-time price estimations based on market trends. Key knowledge areas include machine learning, NLP, web development, and real-time communication. The final product will provide an efficient and user-friendly platform for car trading.

1624. PROJECT NEXUS HUB

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

The Nexus Hub project addresses the inefficiencies and challenges faced by organizations and educational institutions in managing complex projects and collaborations. It is a web-based project management portal designed to streamline the entire project lifecycle, from task assignment to evaluation, through real-time collaboration, secure access controls, and comprehensive reporting.

The motivation behind Nexus Hub stems from the need to replace fragmented tools and manual processes with a unified, scalable solution that improves coordination, productivity, and oversight. By integrating features like automated project listings, progress tracking, and evaluation mechanisms, the system ensures seamless communication among stakeholders, efficient resource allocation, and timely project completion.

Leveraging advanced knowledge areas in web application development, database management, and role-based access control, the Nexus Hub aims to provide an intuitive and secure platform for admins, supervisors, and students. The project culminates in a robust, user-friendly system that not only minimizes administrative workload but also enhances team collaboration and performance evaluation. The end goal is to establish an adaptable and efficient framework that sets a standard for future educational and organizational project management systems.

1625. TAJWEED ASSISTANT

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

This project proposes the development of an AI-powered mobile app for Android and iOS. It is designed to facilitate the learning of Tajweed. The app will allow users to test themselves by reciting, receiving real-time feedback, and creating personalized profiles. Additionally, users will have access to audio recordings from Qari Al Fassy to aid in self-correction. Given the challenges and inaccuracies associated with traditional methods of learning Tajweed, this app aims to provide a more effective and accurate solution. The AI model will be trained using Qari Al Fassy's voice recordings to ensure high-quality feedback and guidance.

1626. BLOOD BOUND: RISE OF THE ALPHA HORDE

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

This project focuses on the development of a survival-based action game with strategic and immersive gameplay elements. The narrative is set in a post-apocalyptic scenario where a squad of mercenaries must infiltrate a zombie-infested building to rescue humans before a scheduled government bombing. The zombie outbreak, stemming from a failed bioweapon experiment, has led to the emergence of two distinct types of adversaries: the standard zombies and the highly intelligent, fast, and organized "alpha zombies."

The game is designed to challenge players through dynamic squad management, resource optimization, combat, and puzzle-solving. The player can alternate between squad members, each possessing unique skills, and direct AI-controlled teammates to perform tasks or hold strategic positions. Limited resources such as ammunition and health kits necessitate careful decision-making, enhancing the tension and strategy. Puzzle mechanics, including bypassing security systems, further enrich the gameplay.

Developed using Unity as the primary engine and Blender for creating 3D assets, the game incorporates AI-driven behaviors for both enemies and squad members. The project also integrates sound design from external sources like the Unity Asset Store and YouTube to build a compelling atmosphere. The culmination of this effort will showcase expertise in game development, artificial intelligence, 3D modeling, and interactive design.

Upon completion, this game will offer an engaging and intense experience, blending action-oriented combat, strategic planning, and narrative-driven objectives. It will serve as a testament to the team's technical skills and creativity in creating an immersive entertainment product.

1627. COOK BEST

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

With the help of our recipe sharing website, users may find and make delicious food. A strong search engine makes it simple for consumers to locate recipes that suit their particular tastes, taking into account important ingredients, cuisine style, and dietary constraints. To help customers make educated decisions, each dish includes comprehensive directions, ingredient lists, and nutritional data. Users can rank, review, and discuss their culinary experiences in a lively community that is fostered by the site. By putting the user experience first, we hope to uplift and unite foodies everywhere. By utilizing AI and machine learning, the platform is able to make recipe recommendations based on users' dietary requirements, preferences, and historical behavior. Moreover Virtual cooking workshops with famous chefs and interactive culinary reipes are available to users. Users can take part in cooking challenges, join cooking groups, and follow other users. Users may access recipes and culinary advice even on the go thanks to the platform's optimization. Highlight how the community develops and disseminates recipes, encouraging a feeling of community and cooperation among users. Emphasize how data analytics are used to comprehend user trends and preferences, allowing the platform to make tailored suggestions and continuously improve. If relevant, discuss any programs that support sustainable cooking methods, like utilizing in-season ingredients and cutting down on food waste.

1628. EVIDENCEGUARD

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

Evidence Guard is a blockchain-based evidence protection system designed to secure and manage digital evidence in judicial proceedings. The system leverages the immutable and decentralized nature of blockchain to ensure the integrity, authenticity, and traceability of digital evidence. By implementing cryptographic hashing, smart contracts, and role-based access control, Evidence Guard provides a tamper-proof and transparent platform for evidence submission, verification, and audit. This innovative approach addresses the critical challenges of evidence tampering, loss, and unauthorized access, enhancing the reliability of the judicial process and fostering trust among stakeholders.

In addition to its robust security features, Evidence Guard incorporates decentralized storage solutions, ensuring the safe preservation of evidence files while reducing the risk of data loss. The system's real-time verification tools allow seamless evidence validation, enabling stakeholders to confirm the authenticity of records promptly. By integrating multi-language support and a user-friendly interface, Evidence Guard is tailored for diverse judicial environments, promoting accessibility and usability. This project represents a significant step forward in leveraging technology to strengthen legal systems and safeguard the principles of justice.

1629. DROPSHIP INSIGHTS

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

Dropship Insights is a web application designed to simplify the drop shipping process for small business owners and entrepreneurs. This user-friendly platform offers a seamless experience with advanced features to help users make informed decisions in their e-commerce ventures. By simply

providing keywords, users can easily hunt for trending products. The platform compares similar products based on price, displaying the results through clear and interactive graphical analyses. Dropship Insights utilizes data scraped from popular online marketplaces, ensuring accurate and up-to-date information. Additionally, it supports integration with Shopify and WordPress stores, allowing users to effortlessly manage and sync their product listings. With its intuitive interface and robust functionalities, Dropship Insights aims to empower users by saving time, reducing effort, and maximizing profitability in the competitive world of drop shipping. This application addresses the common challenges faced by drop shippers and serves as a reliable tool for smarter product sourcing.

1630. SHOPPING SPREE

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

The Virtual Supermarket System is a web-based platform designed to enhance online shopping experiences for customers while streamlining management operations for administrators. This project addresses significant challenges such as inefficient order handling, lack of user personalization, and administrative difficulties in managing inventory and orders. The system incorporates essential e-commerce features, including product browsing, real-time cart management, secure payment processing, and an admin dashboard for product and order management.

To develop the platform, various knowledge domains are utilized, including database management, secure payment gateway integration, user interface design, and backend development. Advanced technologies and methodologies ensure real-time synchronization between user actions and backend processes, scalability for future growth, and a secure environment for customer transactions.

The anticipated results include a robust, user-friendly system that provides seamless shopping and administrative functionalities. The project aims to bridge existing gaps in e-commerce systems by delivering a scalable, efficient, and intuitive solution, meeting both user and business objectives.

1631. BIZANALYZER

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

The BizAnalyzer project aims to develop an affordable, user-friendly financial analytics tool tailored for small and medium enterprises (SMEs), addressing the gap left by existing financial technologies that are either too expensive or too complex for SME use. Leveraging key knowledge areas including software engineering, machine learning, and data visualization, this project intends to enhance SMEs' decision-making capabilities by enabling demand forecasting, cash flow management, and profit and loss projections. Scheduled over two semesters, the project will unfold in four phases: Requirements Specification, Software Design Specification, Design and Test Specification, and Final Submission, each with specific deliverables such as system architecture diagrams, UI/UX designs, and a working prototype. Weekly milestones will ensure structured progress and timely evaluations. BizAnalyzer's goal is to deliver a scalable financial management tool that simplifies complex data analytics for SMEs, improving their financial health and operational efficiency, thus making a significant contribution to the FinTech field.

1632. ASSETIN:ASSET MANAGEMENT TOOL

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

Asset management is crucial for organizations to maintain operational efficiency, yet many existing tools suffer from fragmented systems, poor usability, and limited scalability. These inefficiencies lead to increased costs, underutilization of assets, and difficulties in decision-making processes. Our project, AssetIn, aims to address these challenges by providing an intuitive, cloud-based asset management tool that integrates real-time data, vendor management, and predictive analytics.

Leveraging modern technologies such as Angular, .NET, and MySQL, the tool offers a comprehensive solution for tracking both fixed and variable assets, managing vendor relationships, and streamlining maintenance schedules. The tool also incorporates cloud storage for secure and scalable media handling, allowing organizations to store asset-related images, documents, and videos efficiently.

By addressing the shortcomings of existing tools such as Ralph3, SnipeIT, and Asset Tiger, AssetIn is expected to significantly improve asset management workflows. This solution will enhance user experience, optimize asset utilization, and reduce operational costs for organizations. Collaboration with Nextronix ensures industry-standard practices, and the final product will be tested in real-world scenarios to deliver a robust and practical asset management tool.

1633. STAR'S EDGE

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

This project aims to fill the niche that exists in the mobile gaming market for a game that seamlessly blends Real-Time Strategy (RTS) and a Souls-like fusion, focusing primarily on the Science Fiction genre. Most mobile gaming developers concentrate on one genre, strategy or action, only very few have managed to combine the two quite well into one game, especially in a challenging storytelling context. The importance of the game comes from its strategic decision-making in the tactical-scope gameplay, and hence, the perspective and experience produced for the users of the mobile devices is quite different.

The game follows four characters as they explore a mysterious space station, uncovering its dark history through 3D puzzles, holograms, and diaries. As players progress, they will encounter hostile aliens and the station's surviving human inhabitants, culminating in a battle with the alien commanding officer. The narrative-driven experience blends strategic resource management with intricate combat systems, offering a compelling sci-fi horror storyline.

To achieve this, the project draws on several key knowledge areas: game development, artificial intelligence, mobile optimization, and networking for multiplayer integration. The game will also leverage modeling, animation, and algorithms to create dynamic environments and responsive AI that adapt to player decisions. The game will also follow the 9 Rules of Game Design from Flow: The Psychology of Optimal Experience to make players feel fully immersed and involved, achieving a balance between skill and challenge.

1634. RAPID RESCUE: AMBULANCE DISPATCH OPTIMIZATION THROUGH AI AND REAL-TIME VIDEO WITH ANALYTICS

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

The traditional method of Road accident reporting relies on citizen calls, often resulting in delays in emergency response. So, to eliminate critical delays in emergency response and improve the efficiency of ambulance services, our project introduces an innovative system utilizing traffic cameras

to detect traffic accidents and send alerts to the nearest ambulance services. Upon detection, the system notifies the closest ambulance services of the accident, ensuring a rapid response. Our project, Rapid Rescue, is based on artificial intelligence merged with video streams to recognize the accident. This is followed by notification to ambulances about the accident, its location, and the way of getting to the accident location. This ensures that it has accuracy, thus improving the emergency services of urban areas and saving people's lives. Computer vision algorithms analyze video feeds from strategically placed cameras to identify accidents. In addition to the detection and notification system, an application will feature a management dashboard for ambulance services. This dashboard will store accident location data.

1635. TRAFFIC LOAD BALANCER

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

Traffic load balancer is a mobile 3D simulation game with a focus on traffic taking, ostensive learning of the effects of traffic and environmental factors and traffic offences. Civilization takes place in a practical city that focuses on traffic control, signals, roads improvement and environmental issues such as the use of public transport, planting trees. The game also adopts Unity, Blender and complex algorithms for real time traffic condition and its impact on the surroundings. It also improves problem solving and decision making as well as general learning on sustainability within cities, thus providing an interesting and efficiently designed video game type mobile learning platform.

1636. PRO FLOW AI

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

1637. MARROW INSIGHT

Project Advisor	MR. AWAIS M. LODHI
Status	In Process of Completion

Bone marrow cell classification plays a pivotal role in diagnosing various hematological disorders, including bone marrow cancers such as leukemia. This project leverages computer vision and advanced machine learning techniques to develop a robust multi-classification model for identifying different types of bone marrow cells. The primary objective is to provide an automated and accurate diagnostic tool to assist clinicians in determining a patient's health status and detecting early signs of bone marrow cancer. The study utilizes convolutional neural networks (CNN) in combination with advanced algorithms such as Support Vector Machines (SVM), XGBoost, and Siamese networks etc. to achieve high classification accuracy. These methods are chosen for their efficacy in handling complex and imbalanced datasets typical of medical imaging. By applying state-of-the-art preprocessing, feature extraction, and model optimization techniques, the project addresses the challenges of variability in cell morphology and overlapping visual features across different classes. The expected outcome is a reliable, efficient, and scalable system that significantly reduces the time and manual effort required for bone marrow analysis while maintaining diagnostic accuracy. This system has the potential to aid in early cancer detection, streamline laboratory workflows, and improve patient outcomes by enabling timely and precise interventions.

1638. EDUCAREER

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

EduCareer is a comprehensive platform designed to bridge the gap between educational opportunities and career development for students. The primary objective of this project is to provide a centralized platform where students can access a wide range of services, including scholarship information, career guidance, document assistance, and virtual campus tours. By utilizing advanced technologies like web scraping for scholarship retrieval and AI-powered chatbots for personalized career advice, EduCareer aims to simplify and enhance the student experience in applying for scholarships, creating resumes, and preparing for future careers.

The problem this project addresses is the fragmented nature of student resources, with information often spread across various platforms, leading to confusion and inefficiencies. The solution provides students with a user-friendly interface where they can access all relevant career resources in one place. Key knowledge areas utilized in this project include web scraping, AI for chatbot functionalities, database management, and web application development. The results expected from this project are a robust platform capable of offering personalized scholarship recommendations, resume creation assistance, career guidance, and an organized space for university event registration and campus tours. Through this approach, EduCareer aspires to streamline the career preparation process for students and improve their prospects for success in the job market.

By solving the problem of disparate resources and offering a one-stop solution for students' educational and career needs, EduCareer is set to make a significant impact on the student community.

1639. DIGI DOC

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

This project aims to develop a generative AI voice chatbot for hospital appointment reservations. The chatbot will interact with users over phone calls, using speech-to-text and natural language processing to understand user queries and book appointments. It will handle multiple users simultaneously and update a hospital's web portal with the appointment details. The system is designed to provide seamless, real-time communication, improving efficiency in hospital appointment booking processes. Key technologies include speech recognition APIs, VoIP platforms, and cloud-based infrastructure for scalability.

1640. FATHER'S FURY

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

Our aim is to develop an Action-Thriller game that is carried by its intriguing storyline along with compelling characters. The levels/stages will have a timer to ensure quick gameplay. In this era, games rely solely on their graphics and open worlds but are shallow story wise. Moreover, games gravitate towards generic norms and trends of an amicable and friendly protagonist which is totally unrealistic, thus failing to capture the market and players' interest. Audiences want to see humanity and flaws in the character. This project will be developed mostly through a Gaming Engine and a 3D software. We aim to develop an 'R' rated mobile game to be released on the market.

1641. MEDICHECK

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

The healthcare system faces significant challenges in managing prescription accuracy and medication availability, particularly when dealing with poorly written prescriptions. Patients often struggle to decipher unclear prescriptions, leading to medication errors and delays in treatment. Additionally, pharmacies face difficulties managing inventory and ensuring the availability of prescribed medicines. In regions with multiple pharmacies, patients may need to visit several locations to find the required medications, which is time-consuming and inefficient. There is a critical need for a system that not only interprets poorly written prescriptions but also facilitates the seamless checking of medicine availability across multiple pharmacies, improving patient care and operational efficiency.

1642. DRIVE WISE: (AI-BASED PERSONALIZED VEHICLE RECOMMENDATIONS)

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

DriveWise is an AI-powered web platform designed to provide personalized vehicle recommendations and facilitate car transactions. This system addresses the complex decision-making process in the car-buying journey by offering tailored suggestions based on user preferences, current market trends, and machine learning algorithms. By combining a recommendation engine with a user-friendly marketplace, DriveWise serves as a comprehensive solution for prospective buyers and sellers. The project employs a hybrid recommendation approach, integrating collaborative filtering and content-based filtering, to maximize accuracy and relevance. DriveWise aims to streamline the automotive shopping experience, enhancing satisfaction and market efficiency.

1643. VIRTUAL BOOK STORE

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The Virtual Bookstore is an online platform that aims to change the way people discover, read, and share books. It offers a wide variety of books, including textbooks, novels, and non-fiction titles, so there's something for everyone. Users can easily search for books by title, author, or topic, and based on what they like to read, the platform will suggest books that might interest them. One of the platform's key features is the ability to download digital copies of books, or users can choose to order physical versions if they prefer a hard copy. It also allows people to sell their used books at lower prices, which helps promote sustainability by reusing books instead of buying new ones. In addition to reading, the platform has a community section where users can discuss books, share their opinions, and interact with fellow readers. This creates a lively space where people can connect over their love for books and reading. Overall, the Virtual Bookstore is designed to make reading more accessible, affordable, and enjoyable for everyone.

1644. STREET TO SPORT INNOVATIONS

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

This project addresses the fragmented car modification market by developing an all-in-one online platform for automotive customization. Currently, users must navigate multiple websites, resulting in time-consuming processes, high costs, and compatibility issues. Our solution simplifies this by offering a comprehensive range of performance and aesthetic enhancements tailored to specific car models on a single platform. In addition, we provide pre-configured modification deals for specific car models and a computerized appointment system, allowing users to schedule installations seamlessly. Using web technologies like HTML, CSS, JavaScript, Bootstrap/Tailwind CSS, React, Python Django, and MySQL, this project integrates these customization options into a streamlined, cost-effective user experience that empowers car enthusiasts to transform their vehicles efficiently, ensuring compatibility and optimal performance.

1645. ATHLETE EDGE

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

Athlete Edge is a cutting-edge platform designed to enhance athletic performance through advanced video analysis techniques. This system addresses the limitations of traditional wearable-based performance tracking by offering a non-invasive, data-driven approach to monitor and analyze athlete movements. Using OpenPose, a state-of-the-art computer vision tool, Athlete Edge captures key performance metrics such as speed, agility, endurance, and movement patterns in real time, directly from video footage. The platform leverages machine learning algorithms, including Random Forest and Gradient Boosting Machine (GBM), to analyze collected data and uncover trends. These insights provide actionable recommendations that enable athletes and coaches to optimize training regimens and improve overall performance. The system is scalable, supporting individual and team analysis across various sports disciplines. By eliminating the reliance on wearable devices, Athlete Edge ensures accurate, real-time feedback without compromising athlete comfort or natural movement. This innovative solution empowers athletes to reach their full potential and offers coaches a powerful tool to make data-informed decisions, revolutionizing the field of sports performance analytics.

1646. WEATHER SPORTIFY

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The Weather Sportify project creates a web application that combines real-time weather data with advanced meteorological APIs to enhance outdoor gaming experiences. It tackles the issue of canceled outdoor games due to unfavorable weather, alleviating player disappointment and inconvenience. By utilizing weather APIs, sophisticated playability algorithms, and an intuitive interface, the app delivers personalized game recommendations, social sharing features, event planning tools, and feedback system.

This project draws on expertise in artificial intelligence, and database management to build a comprehensive platform for outdoor enthusiasts. The anticipated outcomes include a scalable, user-friendly application that encourages physical activity, fosters social interaction, and strengthens community ties, aligning with Sustainable Development Goals (SDGs) such as Good Health and Well-being, Sustainable Cities and Communities, Climate Action, Industry, Innovation, and Infrastructure, and Partnerships for the Goals.

1647. PASSWORD CRACKING

Project Advisor	MR. FARAZ ALI
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Status	In Process of Completion
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In today's era, mobile phone security measures such as passwords, pattern locks, facial recognition, and voice recognition are robust and challenging to bypass. While there are various software options available online, many are either not accessible in certain regions due to security concerns, expensive to purchase, or come with specific requirements such as enabling debugging mode or OEM lock on the device. Our project aims to ethically investigate and experiment with techniques and software for bypassing an Android phone's password without modifying any data on the device. We will utilize tools like Android Debug Bridge (ADB), JTAG or serial debugging tools, John the Ripper, and Hashcat to understand and work within the Android security framework. Our goal is to contribute insights into the effectiveness of current mobile security measures and provide valuable contributions to cybersecurity.

1648. WIFI PASSWORD BREAKER: ENCHANCING NETWORK SECURITY

Project Advisor	MR. FARAZ ALI
Status	In Process of Completion

The goal of this project is to design Raspberry Pi based platform for Wi-Fi penetration testing to detect the weakness in wireless network. For this purpose, Raspberry Pi is installed with ethical hacking tools and custom scripts for capturing network traffic, cracking passwords, and more, and evaluating the efficacy of different security solutions. This project reveals how easily one can crack poor passwords to Wi-Fi and poor security settings like MAC filtering. Thus, by comparing Wi-Fi Protected Access (WPA, WPA2, WPA3), Encapsulated Wireless Encryption Protocol (WEP), the project gives recommendations for a more secure connection. The aim is to create a simple yet affordable tool, which can help security practitioners and enthusiasts to evaluate and improve Wi-Fi security.

1649. TURBO TAXI

Project Advisor	MR. FARAZ ALI
Status	In Process of Completion

Turbo Taxi is a high-energy, single-player driving game where players assume the role of a taxi driver, racing against the clock to pick up and drop off passengers. Set across varied environments, including bustling city streets, quiet suburban areas, rugged hill stations, and expansive deserts, each location presents unique challenges that keep gameplay fresh and engaging. Players must navigate AI-controlled traffic, avoid obstacles, and manage time-sensitive passenger pickups, all while adapting to changing terrain and road conditions.

The game offers vehicle customization, allowing players to modify their taxis with options affecting both appearance and handling, which enhances the gaming experience by catering to different play styles. Turbo Taxi's AI-driven traffic provides an added layer of difficulty with unpredictable road conditions that demand quick thinking and precision driving. These mechanics offer a unique twist on classic driving games, setting Turbo Taxi apart from titles like Crazy Taxi and Need for Speed by emphasizing dynamic, real-time challenges within a realistic setting.

Built in Unity, Turbo Taxi leverages Unity's advanced capabilities to deliver immersive 3D graphics and authentic vehicle physics, enhancing player immersion. The game is optimized for desktop platforms, prioritizing both visual appeal and replayability. The result is a well-rounded driving experience that combines strategic gameplay, skill-based challenges, and engaging visuals to encourage players to keep coming back for more.

1650. SENTIMENT ANALYSIS BASED UNIVERSITY RECOMMENDATION SYSTEM

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

The Sentiment Analysis Based University Recommendation System is designed to help prospective students make well-informed decisions by recommending universities based on sentiment analysis of user reviews. By collecting reviews from multiple online platforms such as Google Reviews and social media, the system analyzes the sentiment of each review—whether positive, negative, or neutral. It matches user preferences, like academic focus or campus environment, with this sentiment data to generate personalized university recommendations. Additionally, the system allows users to compare universities based on sentiment scores across various categories, including faculty, campus life, and facilities. With integrated features for review collection, sentiment analysis, recommendation generation, and comparison visualization, the system offers a user-friendly platform that provides reliable and relevant information, enabling prospective students to make confident and informed decisions about their academic future.

1651. HEALTHY BITE

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

The project "HealthyBite" focuses on developing a mobile application aimed at enhancing the ease of purchasing fruits and vegetables while providing personalized health recommendations. The app addresses the gap between accessing fresh produce and receiving tailored dietary advice, especially for users with specific health conditions like diabetes, hypertension, and cardiovascular diseases. HealthyBite integrates AI and machine learning to offer individualized recommendations based on user health data, helping to promote a balanced diet and overall well-being. Additionally, the app offers a seamless shopping experience by allowing users to browse, purchase, and track their orders, contributing to a healthier lifestyle. The application stands out by combining e-commerce functionality with AI-driven health recommendations. Expected outcomes include improved user health by promoting the consumption of the right types and quantities of fruits and vegetables. It also proposes features like health tracking, budget-friendly alternatives, reorder alerts, and calorie charts to enhance user engagement and promote consistent healthy choices. Through advanced data analysis, the app dynamically adjusts recommendations based on updated health data, offering a personalized and responsive experience for users.

1652. PROACTIVE APPLICATION HANDLING TOOL

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

This project aims to address inefficiencies in the Final Year Project (FYP) management process at the University of Central Punjab (UCP) by developing an automated web-based platform. The platform will streamline FYP submissions, evaluations, and communication between students and faculty. Key features include an AI-powered chat-bot for real-time student support and data analytics to assess project performance. By enhancing efficiency, transparency, and collaboration, the project seeks to improve the FYP experience, leading to better student satisfaction and academic outcomes. The solution will integrate web development, AI, and data analytics to optimize FYP management.

1653. AI-DRIVEN ECOMMERCE, WAREHOUSE, AND POS MANAGEMENT SYSTEM FOR LOCAL VENDORS

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

The intended AI-powered E-commerce, Warehouse, and Point of Sale Management System intends to improve the business processes of local sellers in Lahore, Pakistan by facilitating management of online sales, offline sales, and inventories in a single place. This system combines e-commerce, POS, and warehouse management together while adding intelligent features such as inventory management through sensors, replenishment through demand planning, and chatbots. This allows to utilize machine learning and analytics tools to improve the management of inventories, order processing and customers. The core objectives of the platform include creation of modular ecommerce application, unification of POS systems, introduction of AI powered analytics, and enabling microtasking automation to facilitate decision making. By bridging the holes in existing systems, it supports seamless operations, lowers costs and increases efficiency for micro, small and medium enterprises in the highly competitive online environment.

1654. AUGMENTED REALITY FURNITURE VISUALIZATION MOBILE APPLICATION USING FLUTTER AND UNITY

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

This project proposes a mobile application that leverages Augmented Reality (AR) to allow users to visualize and select furniture and decorative items in real-time within their living spaces. The application aims to address the challenges of traditional and online shopping by providing an immersive AR experience where users can interact with 3D models of furniture. In addition, the application will integrate sentiment analysis to offer personalized recommendations based on user feedback and reviews. Our project focuses on creating a competitive tool in the market by combining advanced AR, high-quality visualizations, and data-driven insights through sentiment analysis, which differentiates it from existing solutions like IKEA Place and Houzz. This project will utilize Flutter for cross-platform mobile development, Unity for AR functionality, and Firebase for backend services, ensuring scalable and efficient data handling.

1655. LEARNING ODYSSEY

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

Learning Odyssey is a modern platform that helps students and professionals by offering personalized recommendations for their education and careers. Using advanced computer vision and machine learning, it suggests study programs and job opportunities tailored to each user. Built with CSS and Bootstrap for the front-end, and MySQL for the back-end, it provides a strong and reliable system. Key features include job recommendations, Final Year Project (FYP) suggestions, GPA predictions, and easy user authentication with profile management. Learning Odyssey aims to create a smooth and helpful experience for all users.

1656. AI-POWERED PDF-TO-VIDEO CONVERTOR

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
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Status	In Process of Completion
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This project aims to develop an AI-driven system that transforms static PDF documents into engaging, high-quality videos, addressing the limitations of traditional PDFs in interactivity and appeal. The proposed solution automates the conversion process by utilizing Optical Character Recognition (OCR) for text extraction, Natural Language Processing (NLP) for content analysis, and generative AI to create contextual illustrations and animations. These are synchronized with AI-generated narration to produce dynamic MP4 video outputs. The system is implemented through a dual-platform approach, comprising a mobile app for user-friendly accessibility and a web app with advanced features for scalability and customization. This innovative approach caters to fields such as education, corporate training, and marketing, where dynamic content is crucial for audience engagement and comprehension. The project integrates multiple knowledge domains, including machine learning, NLP, multimedia processing, and software engineering. The anticipated outcome is a robust, scalable, and user-centric platform that bridges the gap between static content and interactive media, significantly reducing manual effort while aligning with modern digital content consumption trends.

1657. TOKENTRADE HUB (A DECENTRALIZED MARKETPLACE FOR NFTs)

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

The NFT ecosystem faces critical challenges, including complex interfaces, high transaction fees, and security vulnerabilities, which hinder adoption by creators and collectors. TokenTrade Hub redefines the NFT marketplace by offering a decentralized platform that ensures secure, transparent transactions through blockchain-based smart contracts. The platform simplifies NFT trading with a user-friendly interface, robust security measures, and flexible multi-currency payment options. By leveraging advanced technologies such as React.js, Node.js, and Solidity, TokenTrade Hub delivers a seamless and scalable solution. With additional features like social engagement tools, it fosters a vibrant community, making NFT trading accessible, rewarding, and engaging for users of all experience levels.

1658. THE CAMPUS NEST

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

The Campus-Nest project focuses on the accommodation challenges outstation students have to go through when seeking rental places relative to universities that include getting lost in local surroundings and none or insufficient information. The platform provides 360-degree views of dorm rooms, bathrooms, and the mess areas and others which spare students of travel expenses in making choices. These include a simple, intuitive and interactive interface with a rating and reviews system, intuitive filters of location and amenity, a chat box for communications, as well as a safe booking and payment facility.

Additionally, Campus-Nest utilizes modern technologies such as React.js A.I recommended system and 360 virtual walkthroughs by incorporating accessibility to make sure students are safe while making effective decisions. The project seeks to address the accommodation challenges that students face while selecting a hostel, hence, reducing the time and cost in trying to find suitable accommodation in a new unfamiliar location.

1659. FREELANCE HUB

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

Freelance Hub is a transformative freelancing platform designed to address the pressing challenges faced by freelancers and clients, particularly within the Pakistani market. Existing freelancing platforms often impose high commission fees, offer suboptimal communication tools, and lack efficient payment gateways for local users. Freelance Hub aims to tackle these issues by providing a cost-effective, secure, and user-friendly marketplace. The platform's key features include real-time audio and video calls, spam detection for safer interactions, and integration with local payment systems like JazzCash and Easypaisa to simplify transactions.

The platform emphasizes enhanced communication and usability. Real-time audio/video calling and messaging enable freelancers and clients to collaborate effectively, reducing the likelihood of misunderstandings or project mismanagement. Spam detection mechanisms foster a safer environment by identifying and filtering inappropriate or unwanted messages, ensuring a smooth user experience. Moreover, the platform incorporates a unique ranking system to help freelancers showcase their expertise and build credibility, making it easier for clients to identify the right talent for their projects. Freelance Hub is built using modern, robust technologies. The use of WebRTC ensures reliable and low-latency communication, while MongoDB provides a fast and scalable database solution for real-time data handling. The platform's user interface, developed with Material UI, prioritizes accessibility and ease of navigation, catering to users with varying levels of technical proficiency. By combining these advanced technologies, Freelance Hub delivers a seamless and efficient experience for all users. Beyond its functional capabilities, the project is an opportunity for the development team to gain hands-on experience with industry-leading frameworks and tools. By tackling real-world challenges such as task division across cities and mastering frameworks like Node.js and WebRTC, the team not only develops an impactful platform but also grows as professionals. Freelance Hub aspires to redefine freelancing in Pakistan, providing a cost-effective, secure, and empowering ecosystem for freelancers and clients alike.

1660. AI-ENCHANTED BLOCKCHAIN FOR EFFICIENT CHAINS

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

In today's competitive business environment, ensuring transparency, efficiency, and accuracy in operations is vital for sustainable growth. This project introduces an ERP integrated with cutting-edge technologies such as artificial intelligence (AI) and blockchain. The system addresses challenges such as fragmented workflows, inefficiencies in data management, and vulnerabilities in transaction security.

By leveraging AI for predictive analytics, the ERP provides actionable insights into demand forecasting and operational trends. Blockchain integration ensures data security, immutability, and transparency in transactions and document handling. The core modules include user authentication, inventory management, financial transactions, and report generation.

Through this solution, users gain a unified platform to streamline operations, make data-driven decisions, and foster trust in business processes. The anticipated result is a robust, secure, and efficient ERP that significantly enhances operational effectiveness across various industries.

1661. SMART EVALUATOR

Project Advisor	MR. IRFAN LATIF
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Status	In Process of Completion
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The "Smart Evaluator" project assists teachers in checking student's answers automatically on their handwriting. It reads handwriting and understands it using advanced tools. And with smart models like BERT [1] and GPT [2], the system reads handwriting and then explains and scores how accurate and in the right direction the answers are. Essentially, this project helps schools make grading faster, fairer, and more efficient by releasing stress on their teachers.

1662. DIGITALIZED PORTAL FOR MODEL UNITED NATIONS (MUN) EVENTS

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

Digitalized Portal for Model United Nations (MUN) App aims to develop a comprehensive virtual event platform, similar to Airmeet, designed for hosting engaging online events, webinars, and conferences. The platform will feature live streaming, real-time audience engagement tools like polls and Q&A, virtual networking tables, customizable event spaces, and detailed event analytics. Additionally, it will integrate accessibility tools, including language translation and transcription services, to ensure participants from diverse backgrounds can fully engage, regardless of language barriers. AI-powered chatbots and personalized recommendations will further enhance the overall event experience.

1663. VENTURE CONNECT

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

The lack of accessible funding opportunities and a structured investment process hinders the growth and success of innovative startups, preventing many aspiring entrepreneurs from turning their ideas into reality. Traditional funding sources, such as venture capitalists and angel investors, often have high barriers to entry, leaving a significant portion of the population underserved. This gap in the market leads to untapped potential and missed opportunities for economic growth and social progress. Moreover, individual investors seeking to support promising startups face challenges in finding reliable and transparent investment opportunities. The absence of a centralized platform that connects entrepreneurs and investors in a secure and efficient manner limits the flow of capital to innovative ideas.

1664. ADVANCED IOT-DRIVEN HEALTH MONITORING PLATFORM WITH WEB INTEGRATION

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

The abstract outlines the creation of an **Advanced IoT-Driven Health Monitoring Platform with Web Integration**, aiming to transform healthcare delivery by leveraging Internet of Things (IoT) technology. The platform is designed to monitor critical health metrics such as oxygen saturation, heart rate, temperature, blood pressure, and blood sugar levels in real time. Data collected by IoT sensors is transmitted through the ESP8266 microcontroller, a compact and cost-effective module capable of handling Wi-Fi connectivity, ensuring swift and accurate health updates.

The system incorporates **biometric authentication** to secure sensitive health data, ensuring access is restricted to authorized individuals. This enhances data protection, complying with stringent healthcare

privacy regulations like HIPAA. The web-integrated approach allows patients and healthcare professionals to access medical records seamlessly, facilitating secure and organized data management. Additionally, the platform optimizes healthcare workflows by digitizing prescription handling and reducing administrative overhead.

By providing real-time updates and secure management of medical data, the system targets improved patient care and operational efficiency. It emphasizes accessibility for diverse user classes, from patients with minimal technical expertise to healthcare professionals requiring advanced tools.

The abstract highlights the project's dual focus on **technical innovation** and adherence to healthcare standards, acknowledging challenges such as integrating diverse IoT devices, ensuring robust data security, and complying with healthcare regulations. Ultimately, the project aspires to deliver a scalable, user-friendly solution that bridges gaps in traditional healthcare management systems, setting a benchmark for future IoT-driven health applications.

1665. LEGALMIND (AI-DRIVEN CHATBOT)

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

The present work discusses the creation of a new chatbot application that is based on the integration of AI techniques with popular approaches for modern mobile applications to increase usability. It uses Langchain, Prompt engineering, Supabase, Google's generative AI model all of which have been integrated through Flask as the backend API the application's that receive requests, analyze uploaded pdfs, and generate replies from document content. By offering a secure, scalable, and user-friendly interface, Legal-Ease AI empowers lawyers to focus on critical legal tasks while minimizing the time spent on routine document analysis and client inquiries. This tool bridges the gap between advanced legal tech and everyday legal practice, making it an essential resource for modern law firms. The backend involves parsing the legal texts and analyzing them and the frontend is designed with Flutter, which allows the user to upload PDF files, converse with the chatbot in real time and switch between languages English and Urdu. Other functionalities are; the use of supabase as security system for the authentication of the users where there is secure signing in, signing up and password retrieval. A scalability concept was incorporated while developing the system to allow both the backend and the frontend of the application to accommodate diverse users' inputs and activities. Implementation of Flask and Flutter provided the opportunity to separate the concerns, where Flask controls the backend, its decision-making, and data processing, while Flutter focuses on providing an efficient, non-laggy mobile experience. In this paper, the specific requirements, system design, and major choices made during the development process are described, along with the details on how the system was being designed and tested in order to satisfy functional, security, and user's requirements.

1666. LOST AND FOUND PLATFORM

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

The "Lost and Found Platform" is a hybrid application aimed at addressing the inefficiencies of traditional methods for reporting and recovering lost items. This project integrates modern technologies, including NFC/RFID for quick item identification, AI-driven ownership prediction, and image recognition for matching lost and found items. By doing so, it aims to significantly improve the speed, accuracy, and success of item recovery.

The significance of this problem lies in the widespread inconvenience caused by lost personal and valuable items, often affecting people's daily lives. This platform's primary goal is to streamline the lost- and-found process, making it more efficient, secure, and user-friendly. It leverages key

knowledge areas such as mobile and web development, artificial intelligence, image processing, and NFC/RFID technology to create an innovative solution.

The expected results of this project include a functional, scalable platform that can be easily adopted by individuals, businesses, and institutions. It aims to improve item recovery success rates, reduce user frustration, and provide a seamless experience across different devices. The platform will not only simplify the process of locating lost belongings but will also offer enhanced security and ownership verification, addressing a critical gap in existing lost and found systems.

1667. ONLINE LAUNDEY SERVICE APP

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

The online laundry services app is available through an online, tech-enabled answer to the disorganization performed in delivering traditional laundry services. It, therefore, is geared at that busy individual searching for simplicity in laundry management, via scheduling, real-time order and rider tracking, chatting for direct communication, and cash-on-delivery payments. It offers superior user experiences together with operational efficiencies based on Java, Laravel, and SQL. It tries to modernize the service, making it reliable and up-to-date, meeting today's life-striding pace by making the process less frustrating and with transparency due to increased communication.

1668. FARM PROFIT PRO: SMART PRICE PREDICITION FOR FARMERS

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Farm Profit Pro is a web-based application aimed at helping farmers in Pakistan maximize profits by providing data-driven recommendations. The platform integrates real-time market prices, weather forecasts, and transportation costs using machine learning to offer accurate crop price predictions and strategic advice. By addressing key challenges like market volatility and logistical expenses, the system empowers farmers to make informed decisions on crop sales and storage. With expertise in machine learning, web development, and data analytics, Farm Profit Pro offers personalized recommendations that will improve profitability, reduce food waste, and enhance overall agricultural efficiency.

1669. VENTURE LINK

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Our project, Venture Link, aims to create an innovative platform that helps entrepreneurs determine the viability and potential success of their business ideas. By utilizing a Website interface, users can submit their ideas and answer dynamic questions that help evaluate the concepts from multiple perspectives. The platform will employ machine learning algorithms to process and evaluate business proposals, taking into account factors such as market feasibility, competition, and available data. The Website will generate ranked ideas based on their likelihood of success, providing investors with a clear, data-driven list of potential opportunities. This application seeks to foster more successful startups by simplifying the process for both entrepreneurs and investors, ensuring objective assessments and better investment matches.

1670. SMARTSCHOLAR: AI-POWERED SCHOLARSHIP FINDER AND APPLICATION ASSISTANT

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Smart-Scholar is an advanced AI-powered app designed to simplify the scholarship search and application process for students. By leveraging artificial intelligence, it matches users with scholarships suited to their academic backgrounds, locations, and personal profiles, helping them discover the most relevant opportunities. The app also offers AI-driven assistance for crafting application documents, such as essays, statements of purpose, and recommendation letters, to improve application quality and success. Smart-Scholar includes social media integration, allowing students to share their progress and achievements within a supportive community. Additionally, it provides comprehensive financial aid information, including details on grants, loans, and cost estimation tools, equipping students to make informed financial decisions. By streamlining the scholarship journey, Smart-Scholar aims to boost application success rates and empower students to achieve their educational goals.

1671. CAREERQUEST

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

CareerQuest is an AI-powered platform designed to provide personalized career recommendations and job matching specifically within the IT sector, based on user profiles and skill assessments. Utilizing Natural Language Processing (NLP) and AI, it helps users align their skills with job market trends, offering tailored career paths, job suggestions, and relevant courses. By integrating real-time data and AI-driven insights, CareerQuest enhances career growth in the IT field through skill development, interview preparation, and job opportunities, addressing the skills gap and empowering users to make informed career decisions.

1672. INDOOR NAVIGATION AND INFORMATION SYSTEM FOR UNIVERSITIES AND MALLS

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

The "Indoor Navigation and Information System for Universities and Malls" project aims to address the challenges of navigating complex indoor environments and providing critical information seamlessly. With universities and malls becoming larger and more intricate, users often face difficulties finding specific locations, accessing essential details, and engaging with peers effectively.

This project integrates three core components into a mobile application:

1. Indoor Navigation: Utilizing augmented reality (AR) powered by ARCore and Sceneform, the system guides users through intuitive 3D navigational aids like arrows. Anchored points mapped throughout the environment ensure accurate navigation, with Flutter facilitating crossplatform development and Firebase serving as the database backbone.

2. Chatbot: Designed to enhance user experience, the chatbot offers detailed assistance with university-related queries, including admission procedures, fee structures, academic policies, and more. It also supports virtual Q&A, enabling users to submit text or image-based inquiries, which are processed and answered effectively.

3. Student Forum: A dedicated platform for students to exchange knowledge and seek guidance regarding universities. Integrated filters ensure a constructive environment by moderating and removing negative comments.

The "University Information System Chat-bot" is designed to provide instant, accurate responses to queries about admissions, campus facilities, policies, and events. It simplifies information access for prospective and current students while reducing administrative workload.

1673. PET ADOPTION SYSTEM (MOBILE APP)

Project Advisor	MR. KAMRAN SHABBIR
Status	In Process of Completion

Pawdopt is a comprehensive mobile application designed to streamline the pet adoption process in Pakistan. It provides a unified platform where users can adopt pets, communicate directly with pet owners or shelters, and connect with veterinarians for post-adoption healthcare. By integrating features such as location-based searches, real-time communication, and a vet verification system, Pawdopt addresses the inefficiencies of the current adoption system and fosters responsible pet ownership.

1674. DEEP FAKE DETECTOR

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

Deep fakes pose a severe threat to the integrity of digital content. They are becoming increasingly sophisticated, making it difficult for traditional detection methods to identify them reliably. Current detection techniques often focus on either video or audio separately, which limits their effectiveness. There is a pressing need for a solution that can analyze both modalities simultaneously, providing a more robust detection mechanism.

1675. LAHORE HISTORICAL GUIDE

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

The Lahore Historical Guide is a mobile and web application designed to offer an immersive, interactive experience for users to explore Lahore's rich historical heritage. The app integrates dynamic maps, augmented reality (AR) with compass integration, and image recognition to identify landmarks and provide real-time historical insights. Personalized tour recommendations based on user preferences enhance the experience, while archival photos offer rich context for each site. A key focus of the project is to provide a scalable system that allows third-party developers to extend the app's features through integrated APIs. The project aims to bridge the gap between traditional and non-interactive methods of exploring historical sites by leveraging modern technology, making the app an educational and engaging tool for tourists, students, and locals alike.

1676. BREW SPHERE

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

The Coffee Recommendation System is a hybrid web-mobile application designed to enhance the coffee discovery experience for users. Leveraging Natural Language Processing (NLP) and Machine Learning (ML), the system analyzes user preferences to provide personalized coffee recommendations to the App in a coffee database dense, offering coffee variety, flavor and origin. Users can also find a community platform to share recipes, reviews and ratings, and for communication between coffee enthusiasts. Additionally, the system integrates with local online retailers to enable users to seamlessly purchase recommended coffees. This project aims to combine advanced technology with user engagement to create a unique and exciting coffee discovery space.

1677. CRIC SULTAAN

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

CricSultaan is a comprehensive web platform designed for cricket enthusiasts at all levels, from casual fans to professional players. The platform aims to facilitate seamless connections within the cricket community by enabling users to share content, manage events, and access a wide range of video resources tailored to their needs. With personalized profiles, users can showcase their achievements, track their progress, and connect with like-minded individuals. A standout feature of CricSultaan is its AI-based content quality checks, ensuring that all shared content is relevant and valuable to the community. Additionally, CricSultaan offers event management tools, allowing users to organize, promote, and participate in cricket events with ease. The platform also includes an exclusive online cricket store, offering a diverse range of gear and merchandise. This store is integrated seamlessly into the user experience, providing convenient access to high-quality cricket equipment and apparel. In addition to its existing robust features, CricSultaan will also integrate live scores of international matches by which Users can stay informed in real-time with accurate and timely updates on ongoing matches across the globe. CricSultaan is more than just a tool; it is a community hub where cricket enthusiasts can thrive. By providing a centralized platform for all cricket-related activities, CricSultaan aims to foster a supportive and engaging environment, helping users to connect, learn, and grow in their passion for cricket. Whether you are looking to improve your skills, stay updated with the latest cricket news, or find the best cricket gear, CricSultaan is your go-to destination.

1678. FEATHER TRACK

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

Feather Track is an innovative smart poultry ERP system designed to address inefficiencies and challenges in traditional poultry farming. Leveraging cutting-edge IoT and AI technologies, this system provides an all-in-one solution that ensures improved farm productivity, optimized resource usage, and enhanced decision-making. The project integrates IoT sensors to monitor real-time environmental conditions such as temperature and humidity, delivering critical insights directly to farm managers through a user-friendly mobile application. AI-driven predictions analyze historical data to forecast production outcomes, inventory needs, and potential risks, empowering farm operators with proactive strategies to minimize losses. The mobile app also includes a barcode-based inventory management system, allowing seamless tracking and updating of resources, while a unique farm ranking feature evaluates and ranks farms based on customer feedback and product quality. Additionally, the system generates barcode-based dispatch receipts to streamline logistical processes. By addressing key pain points like high mortality rates, inconsistent environmental conditions, and inefficient inventory handling, Feather Track fosters sustainable and profitable poultry farming. Its

cloud-based infrastructure, real-time data synchronization, and cross-platform accessibility ensure scalability, security, and convenience. The end product aims to revolutionize poultry farm operations, setting new standards for agricultural technology.

1679. SOCIAL ONLINE HEALTHCARE PLATFORM

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

In Pakistan, patients face challenges such as inefficient appointment scheduling, limited access to healthcare professionals, and fragmented communication between patients and doctors. The Social Online Healthcare Platform addresses these issues by providing a centralized system where users can book lab tests, appointments, access personalized health insights, and communicate with healthcare providers through secure channels. The platform also integrates advanced technologies such as AI chatbots and machine learning models to offer personalized healthcare solutions.

1680. AUTOMATED NCEAC FOLDER SUBMISSION PORTAL

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

The Automated NCEAC Folder Submission Portal is a web-based platform designed to automate and streamline the process of submitting academic materials, such as assignments, quizzes, exams, and projects, required for accreditation. The portal simplifies the submission process by automating folder creation based on department, semester, and course. Teachers can upload files, and administrators can review, lock, and approve submissions. Features include bulk uploads, secure access control, notifications for incomplete submissions, and the ability to download all course-related documents as a single PDF file.

1681. RECIPEBASKET

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

RecipeBasket is a smart food e-commerce platform that simplifies meal planning by combining recipe discovery with ingredient delivery. Users can explore personalized recipes, add ingredients to their cart, and have them delivered to their doorstep. The platform includes features like AI-powered recommendations, voice and image-based search, and a Chef Portal where chefs share premium recipes with video tutorials. An Admin dashboard manages stocks, orders, and system efficiency. RecipeBasket aims to make meal preparation easier, reduce food waste, and provide an interactive cooking experience for busy individuals and families.

1682. FARMSMART

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

Pakistan, being one of the largest producers of wheat, faces significant challenges in assessing and ensuring the quality of its wheat grains. Traditional methods for quality prediction are labor-intensive, subjective, and often require expert involvement, which limits accessibility for farmers. This project addresses these challenges by developing an automated wheat quality prediction system, leveraging modern image processing and machine learning techniques. The mobile application allows farmers to

upload images of wheat grains, which are processed on a server using advanced algorithms like Convolutional Neural Networks (CNNs) and K-Nearest Neighbors (KNN). The system aggregates multiple images to provide a comprehensive quality assessment for a batch of wheat, delivering results directly to the farmer. This solution eliminates dependence on intermediaries, reduces costs, and empowers farmers with precise and efficient quality evaluations, ultimately contributing to improved agricultural productivity and economic outcomes.

1683. CHORD-NATOR AI

Project Advisor	MR. M. BILAL KHAN
Status	In Process of Completion

This project aims to develop an AI-powered music generation platform integrated with blockchain technology. The platform addresses the challenge of creating custom, royalty-free music efficiently and securely. By leveraging Meta's MusicGen model, which has been trained on over 3.3 billion data points, the system will offer users high-accuracy music generation tailored to their preferences. Users will be able to upload their voice, set prompts, and customize the generated music through an intuitive dashboard, with options to either continue from or mimic the uploaded audio's melody and loudness. The blockchain integration will introduce decentralized ownership and ensure the originality of generated music by allowing the creation of NFTs (Non Fungible Tokens) for each musical piece. The use of decentralized storage via IPFS will further secure music assets, offering users full control over their creations without concerns of copyright infringement. The project draws upon several knowledge areas, including artificial intelligence, machine learning, blockchain development, smart contracts, and user interface design. Expected results include a functional platform that provides an innovative, secure, and user-friendly way to generate, store, and trade custom music. The platform will serve not only individual creators but also businesses needing unique, copyright-free music for their content.

1684. AI-POWERED ACNE DETECTION AND TREATMENT WEB APP

Project Advisor	MR. M. BILAL KHAN
Status	In Process of Completion

The AI-Powered Acne Detection and Treatment Web App is an innovative solution that uses the power of machine learning, specifically CNNs, to provide an efficient and accessible method for acne detection and treatment. Through the analysis of skin images uploaded by users, the app identifies the type and severity of acne and suggests personal treatment plans based on research in dermatology and medical guidelines. It also contains telemedicine features wherein the users can get in touch with licensed dermatologists. The app values data security, scalability, and user-friendliness to ensure that the overall experience of the user is seamless but adheres to global health regulations. This project makes a difference between dermatology care and technology, hence an important tool for individuals and professionals.

1685. HUMSAYAA APP

Project Advisor	MR. M. BILAL KHAN
Status	In Process of Completion

Humsayaa is a community-driven, cross-platform solution designed to connect users with local service providers across 20+ categories. Addressing the challenges of fragmented platforms and unreliable ratings, the project integrates AI for sentiment-based feedback and dynamic pricing

suggestions. The platform leverages geolocation services, real-time communication, and scalable data management to ensure seamless and efficient service exchanges. Humsayaa aims to create a reliable, competitive marketplace for both service seekers and providers. Expected outcomes include enhanced user engagement and a trustworthy service ecosystem.

1686. MOOD MENDER

Project Advisor	MR. M. BILAL KHAN
Status	In Process of Completion

Mental health challenges are a growing concern in today's fast-paced world, yet access to timely and effective support remains a significant hurdle. This project proposes a Mental Health Support and Monitoring Platform, a comprehensive solution leveraging cutting-edge technologies to address this gap. The platform integrates multi-modal data from text, voice, and wearable devices, enabling a deep and holistic understanding of users' mental states. By employing advanced AI algorithms, it offers personalized insights, real-time crisis detection, and virtual therapy sessions. A robust community support system fosters connections, reducing isolation and promoting shared growth. Prioritizing user privacy and security, the platform utilizes AES encryption to ensure data confidentiality. This innovative solution aims to redefine mental health support by combining technology, empathy, and accessibility, empowering users to take control of their well-being and live healthier lives.

1687. THE LEGEND OF HANAMI

Project Advisor	MR. M. BILAL KHAN
Status	In Process of Completion

The Legend of Hanami is a short stylized story driven third person game, set in a fictional Japan. Japan is well known for their rich culture and history worldwide. 'Hanami' known as 'flower-viewing', might also refer to 'cherry blossom viewing', is a tradition among their culture where people simply enjoy and celebrate the intensity of spring and sakura. 'Sakura' means cherry blossoms, a symbolic flower of the spring, time of renewal and fleeting nature of life. Blending their culture and fascinating storyline with unique visuals, mechanics, the game aims to provide an immersive gameplay to the target audience.

The plot begins in a village 'Hakuba', holding a spring festival where suddenly, the head of the village 'Yoru' gets murdered by some bandits. The assassination causes disruption and destruction in the village, causing an outbreak of a war. The player takes control of a noble woman, 'Hanami' the protagonist, who tries to protect herself and a child from all atrocities and struggles while attempting to move to a safer place. The player will also navigate through the beautiful hand-crafted environments and experience a deep story as it unfolds itself.

1688. ESCAPE FROM THE BLIGHT

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Project Dread: Escape from Blight is a 4-player cooperative first-person extraction shooter set in a dystopian world ravaged by the Blight, a devastating virus that has transformed humans into monstrous beings known as the Blighted. Players assume the roles of prisoners granted the chance for freedom in exchange for their service. Tasked with scavenging resources, crafting weapons, they must survive perilous quarantine zones while uncovering the truth behind the Blight and a potential

cure. The game blends the high-stakes mechanics of extraction shooters with rogue-lite elements, where failure results in permanent consequences, and features procedurally generated open-world environments. Inspired by games like Escape from Tarkov, Deep Rock Galactic, and Metro Exodus, the project introduces unique elements such as real-time crafting, immersive storytelling, and cooperative gameplay to set it apart in the genre. By combining innovative gameplay mechanics with a narrative-driven experience, Project Dread seeks to provide players with an intense, engaging, and replayable experience. This project also serves as an academic opportunity for the development team to enhance their skills in programming, teamwork, and game development while delivering a polished, technically ambitious product.

1689. HYBRID BLOCKCHAIN-BASED FREELANCE MARKETPLACE

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

The Hybrid Blockchain-Based Freelance Marketplace is designed to address the key challenges in existing freelance platforms, including high fees, lack of trust, and data security concerns. By leveraging blockchain technology and smart contracts, the platform ensures secure and transparent transactions while offering a user-friendly centralized interface. This hybrid approach combines the strengths of decentralized and centralized models to create a scalable, efficient, and trustworthy solution. The project integrates APIs for cryptocurrency, decentralized applications (DApps), and Binance payment gateways.

1690. CONQUERORS OF ERIDORIA

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Conquerors of Eridoria is a 3D action-fighting game where players harness the power of the elements in immersive cooperative battles against NPC adversaries. Set in a vibrant fantasy world, the game focuses on strategic 1v1 combat in dynamic, visually striking arenas, each reflecting the unique characteristics of the elemental rulers. Players assume the role of powerful champions imbued with elemental abilities—fire, water, air, and earth—using these powers to combine attacks, counter enemy tactics, and master their characters' distinct fighting styles.

The gameplay is structured around cooperative battles where two players work together to defeat waves of NPCs, culminating in challenging encounters with elemental rulers. Each arena presents environmental hazards and opportunities that players can exploit, such as lava flows in the fire arena or shifting platforms in the air arena, adding depth and variety to each battle. NPCs are designed with reactive behaviors, sensing players' actions and responding dynamically with counters, blocks, or evasive maneuvers, making every encounter unpredictable and engaging.

The core combat mechanics emphasize precision and strategy, allowing players to perform basic attacks, special elemental moves, and ultimate abilities. Defensive options such as blocking, dodging, and counters add layers of tactical depth, requiring players to adapt their playstyle to each enemy's attack patterns and arena challenges.

A robust progression system enriches the gameplay by rewarding players with experience points for their performance in battles. These points unlock new elemental abilities, character upgrades, and customization options, enabling players to tailor their champions to their preferred strategies. The combination of strategic combat, environmental interactions, and character development ensures a high replay value, encouraging players to refine their skills and explore new tactics.

With fluid controls, dynamic NPC responses, and richly detailed environments, Conquerors of Eridoria delivers an action-packed experience. It combines the thrill of fast-paced combat with the satisfaction

of mastering elemental powers, offering both casual players and seasoned gamers an exhilarating journey through a world where teamwork and strategy are key to victory.

1691. RATE IT RIGHT

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

In today's digital landscape, consumers face an overload of information when purchasing electronics, often struggling with biased reviews, overwhelming product specifications, and regional availability issues. This project aims to simplify the decision-making process through a web application that uses natural language processing (NLP), data analysis, and artificial intelligence to aggregate and analyze reviews from multiple sources. By providing a comprehensive product rating and personalized recommendations based on user preferences, the app will enable users to make informed purchasing decisions while also addressing product availability concerns.

1692. DESCENT

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

The Descent is an immersive survival horror game set in a dilapidated, abandoned hospital. Players must navigate through multiple floors, each presenting unique challenges, puzzles, and threats, as they strive to uncover the hospital's dark secrets. The game combines traditional survival horror elements, such as resource management and environmental storytelling, with innovative features like a shard-based currency system and timed sub-Quests. These elements add layers of complexity, urgency, and tension to the gameplay experience. The game employs a mix of stealth and strategy, requiring players to evade terrifying monsters and solve intricate puzzles while managing scarce resources. Ghostly NPCs provide sub-Quests that enrich the narrative and reward exploration, unveiling the hospital's tragic history. The progression through floors is designed to be increasingly challenging, with evolving threats and puzzles to ensure a dynamic and engaging experience. This project aims to showcase expertise in game development, 3D modeling, narrative design, and puzzle integration, leveraging tools like Unity and Blender. By delivering a compelling survival horror experience, The Descent aspires to set a benchmark in innovative and atmospheric gameplay.

1693. ARTIFICIALLY INTELLIGENT RECRUITMENT COUNSELLOR

Project Advisor	MR. M. ZAMAN AZIZ
Status	In Process of Completion

It seeks to use AI technologies to completely reshape the recruiting and job-search processes. The portal will evaluate each candidate's profile, experiences, and talents to recommend positions that best match their background and desired career path. Employers can view the resumes of candidates whose qualifications match the job requirements as filtered by the system. The AI-based resume creation on the web is one of its most notable features. This intelligent matching process will save time and effort for both job seekers and employers.

1694. ENHANCING IOT SECURITY: REAL-WORLD DATA DRIVEN MACHINE LEARNING WITH ACI-IOT-2023

Project Advisor	MR. M. ZULKIFL HASAN
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Status	In Process of Completion
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The rapid expansion of the Internet of Things (IoT) over the last few years, adding unmatched dimensions to the scale and sophistication of cyber threats through diversity, resource limitations, and a lack of standardization with such threats being exemplified by DDoS attacks and unauthorized access. This project addresses the severe lack of balanced and realistic datasets for protecting IoT networks through assembling a complete dataset with the aid of ACI-IoT-2023. In order to improve the application of cybersecurity in interoperable IoT networks, this study employs two machine learning techniques, Random Forest and XGBoost. Based on professional approaches to cybersecurity, artificial neural networks, big data analysis, and IoT platforms, we create the IoTGuard application that will operate in real-time for threats identification and network behavior. The expected outcome is an enhanced security solution which would definitely enhance the ability to detect and prevent cyber threats in IoT systems and hence enhance the secure IoT systems.

1695. WHEIZ: ENCHANING COMMUNICATION WITH AI-DRIVEN FEATURES

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

Wheiz is an AI driven communication platform aimed at solving some barriers that has led to hindered online interactions, such as language barriers and in efficient event managements as well as digital communications insecurity. Real time language translation, event planning, proactive security alerts, emotion tone analysis, and message summarization are all built into this app for a smooth and secure communication.

On the other hand, Wheiz is powered by Natural Language Processing (NLP) to translate messages, detect emotions on top of AI based phishing and malware prevention; all aiming for a competitive, inclusive, and comprehensive communication platform. One of the reasons that the project matters is that it offers real time cross language communication to users, useful for global user.

For the project we will be relying heavily on core areas of knowledge like NLP, AI algorithms, mobile app development using React Native, backend services via Firebase. The final goal is to have an app that bears a new standard of mobile software, in both the personal and professional area, which of course will engage with it in communication, but also will make it safe.

1696. INTELLIPATH AI-DRIVEN PERSONALIZED LEARNING PLATFORM

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

IntelliPath is a personalized online learning platform designed to address diverse learning needs with tailored guidance. It generates dynamic learning roadmaps based on users' goals, skills, interests, and educational preferences, ensuring a focused learning journey. The platform recommends courses that align with individual learning objectives.

A standout feature is its GitHub integration, allowing users to track coding contributions and receive performance points based on predefined criteria. This motivates technical learners and enhances their professional portfolio.

IntelliPath also offers AI-generated quizzes that adapt to users' knowledge levels, providing instant feedback to help identify areas for improvement. Accessibility is prioritized with a vocal assistance

feature that uses text-to-speech to convert on-screen text and documents into speech, ensuring full engagement for visually impaired users.

The Tribes feature encourages community engagement by enabling users to create or join groups for resource sharing and collaboration. AI moderation enforces a strict foul speech ban to maintain a respectful environment.

Gamified leaderboards rank users based on achievements, fostering motivation and healthy competition. Profile Similarity and Engagement Prediction connect users with peers who share similar goals, promoting meaningful interactions within the community.

By combining personalized learning, accessibility, and community engagement, IntelliPath provides an inclusive and adaptive learning experience that empowers users to reach their educational goals and enhance their skills.

1697. AI-BASED MENTAL HEALTH RECOGNITION AND THERAPY BOT

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

The AI-Based Mental Health Recognition and Therapy Bot aims to tackle the rising global mental health challenges, such as depression, anxiety, and stress, by offering a scalable, accessible, and real-time digital solution. Traditional mental health services face barriers like resource limitations, high costs, and stigma, which hinder timely care. This project uses AI to create a chatbot capable of recognizing mental health issues through text input.

The bot detects emotional states via AI model like GPT, fine-tuned to identify indicators of distress. It provides personalized therapeutic responses based on evidence-based techniques, including Cognitive Behavioral Therapy (CBT), relaxation exercises, and positive reinforcement. The goal is to offer empathetic, non-judgmental support, reducing stigma and encouraging open engagement.

Accessible 24/7 on the web, the bot aims to bridge gaps in mental health services, especially in underserved regions or for individuals with scheduling or mobility challenges. Data privacy and security are prioritized, with encryption and compliance to regulations like GDPR ensuring confidentiality.

Key areas include machine learning, cloud computing, and cybersecurity. The project targets 85% accuracy in emotion detection, increased access to mental health resources, and improved user engagement. Ultimately, the bot seeks to provide a cost-effective, empathetic, and secure alternative to traditional mental health care, promoting proactive self-care and addressing critical societal needs.

1698. PAKISTANI PANORAMA

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

The Pakistani Panorama project is a web-based platform developed using the MERN stack. It is designed to enhance tourism and exploration in Pakistan by addressing the challenges of fragmented and inconsistent travel information. The platform serves as a centralized resource, providing detailed information on tourist attractions, accommodations, dining options, historical landmarks, and cultural sites, making it an essential tool for both tourists and residents. Key features include an AI-powered recommendation chatbot that provides personalized travel suggestions, real-time assistance with emergency contact details, and virtual tours of historical and cultural sites. These features aim to simplify travel planning, improve user engagement, and promote Pakistan's rich cultural and natural heritage. The platform also focuses on user safety by offering direct access to local authorities and embassies. By leveraging the MERN stack, the project ensures the

platform is scalable, accessible, and secure. Expected outcomes include improved tourism promotion, enhanced travel experiences, and increased visibility for local businesses. The Pakistani Panorama project contributes to the development of Pakistan's tourism infrastructure, fostering sustainable exploration and appreciation of the country's diverse attractions.

1699. GLUCOAID

Project Advisor	MR. MOHSIN ABBAS
Status	In Process of Completion

Diabetes is a chronic condition affecting millions globally, requiring continuous management to prevent severe complications. Many individuals at risk lack timely access to personalized care, often relying on traditional methods that can be inconvenient and inaccessible. **GlucoAid** addresses this challenge by offering an interactive web-based platform that empowers users to manage their diabetes through tailored advice and health insights.

The platform integrates a chatbot that provides personalized dietary recommendations, an image processing tool for extracting relevant data from HbA1c test, and a diabetes risk evaluation model based on user-provided health data. Additionally, **GlucoAid** offers information about local healthcare providers, allowing users to easily access contact details for scheduling medical appointments.

The project utilizes key knowledge areas such as machine learning, natural language processing, and image processing to deliver a user-friendly, efficient solution. The expected outcome is a comprehensive system that improves diabetes care, helping users make informed decisions to manage their health and reduce the risk of complications.

1700. AUTO RESCURE

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

The Auto Rescue project addresses important road safety challenges by focusing on two critical issues: emergency delays in traffic accidents and driver drowsiness, both of which contribute to the world's highest number of fatalities all. The system combines advanced sensors such as the ESP-32 and MPU-6050 with machine learning algorithms to detect collisions and monitor driver behavior in real time.

In the event of an accident, the system sends an alert to immediate contacts, nearby hospitals and emergency services and locates the victim for immediate medical aid. To combat driver fatigue, machine learning models analyze behavioral indicators, such as steering patterns and facial features, to issue real-time warnings, potentially preventing accidents caused by drowsy driving.

The program leverages key areas of expertise, including embedded systems, machine learning, web and mobile application development, cloud-based technologies (like firebase). Expected outcomes include improving rates through timely medical interventions, increasing road safety by reducing fatigue crashes, and more efficient business communication with employees managing the emergency.

1701. STEEL FURY: BATTLEGROUND

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

"Steel Fury" is a 2D action-packed shooting game designed for mobile platforms, combining the intense, dynamic gameplay inspired by classic arcade shooters like Metal Slug with modern mechanics and visuals. The game thrusts players into the boots of Reacher, a special operative from the Eagle Eye Unit, tasked with preventing the global domination plans of General Kronos, a rogue military leader

using genetically enhanced creatures, advanced robotics, and alien technology to wreak havoc on the world.

The game unfolds across multiple unique environments, including deserts, high-tech labs, and dense forests, where players encounter diverse enemy types, formidable bosses, and constantly evolving threats. The gameplay is fast-paced, with Reacher battling through waves of enemies using an arsenal of upgradable weapons, advanced combat abilities, and tactical power-ups. Key features of the game include enemy AI, a daily rewards system, varied difficulty levels, and an engaging storyline that immerses players in Reacher's mission to restore world peace.

"Steel Fury" addresses several technical challenges, including designing responsive controls optimized for mobile touchscreens, implementing a scalable artificial intelligence system, and balancing the game's difficulty to maintain an engaging player experience. The final product will feature multiple gameplay modes, boss fights, and a progression system that encourages replayability through achievements and weapon upgrades.

The significance of this project lies in its focus on creating a mobile gaming experience that captures the essence of retro action-shooter games, while also appealing to modern players through its advanced gameplay mechanics, intricate enemy designs, and compelling narrative. The game uses fundamental knowledge from game development fields like AI programming, 2D graphics design, and mobile user interface optimization, making it a rich learning platform for both technical and creative disciplines.

Upon completion, "Steel Fury" is expected to stand out as a thrilling and strategic action game, merging nostalgic gameplay with contemporary features, all while delivering a polished, high-quality mobile gaming experience.

1702. VIRTUFIT360- DIGITAL OUTFIT PREVIEW

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Virtufit360 is a novel virtual try-on platform designed for traditional Pakistani wear. It offers an elegant solution to customers' visualization issues while buying clothes like Shalwar Kameez. Using the body segmentation and pose estimation features of advanced AI, Virtufit360 allows seamless as well as realistic virtual try-ons. This facilitates reduction in returns, increases satisfaction for the customers, and fuels e-commerce growth in this market of culturally significant attire.

1703. SPORTS SCEDULER

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Sports Scheduler is a centralized web and mobile application designed to streamline the booking process for indoor sports spaces in Lahore, Pakistan. The platform serves as a one-stop solution where players, teams, arena owners, and coaches can connect effortlessly. Players can browse available sports arenas, including futsal courts, table tennis courts, cricket indoor spaces, and other multi-purpose venues, and book their desired slots directly through the application. This eliminates the need for multiple phone calls to various arenas to check availability, thus reducing time spent and frustration.

In addition to booking sports arenas, players can create or join rooms for team games, where they can interact with other players and book slots as a group. When a room of up to 16 players is filled, the system automatically secures the arena slot. Players can also register for upcoming tournaments, enhancing community engagement and offering opportunities for competitive play. The application also allows users to hire coaches for specific sports, offering a seamless experience for skill development.

Arena owners benefit from the platform by efficiently managing their facilities, setting available time slots, and tracking bookings in real-time. They can also update their arena details, including location, pricing, and capacity. Coaches can offer their services on the platform, manage their schedules, and receive feedback from players, which directly influences their AI-based ratings.

The system incorporates AI to provide dynamic ratings for arenas and coaches, based on player reviews and feedback. This helps users make well-informed decisions when selecting facilities or coaches, improving their overall experience. The AI also adjusts prices based on demand, promoting fairness and convenience in the booking process.

By centralizing all sports-related activities, Sports Scheduler reduces operational overhead for arena owners and coaches while enhancing the convenience for players. The application not only promotes a smoother, hassle-free booking experience but also encourages the growth of sports culture in Lahore by making sports facilities more accessible and transparent. Ultimately, Sports Scheduler aims to improve the efficiency of the sports booking process, save time for all stakeholders, and create a community-driven platform that connects sports enthusiasts in Lahore.

1704. NINJA NONSENSE

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

NINJA NONSENSE is a 2D action arcade game that addresses the challenge of creating an engaging, progressively difficult gameplay experience. The central problem revolves around balancing difficulty with playability as players advance through levels while keeping the experience fresh with AI-driven enemy evolution. The game features a warrior navigating obstacles and defeating increasingly powerful final enemy bosses, with AI dynamically adjusting the strength of bosses after each level. Players are equipped with a weapon wheel to store weapons acquired from previous bosses, adding strategic depth.

This project leverages knowledge of AI, game design, and player engagement to deliver a dynamic and challenging arcade experience. The expected result is an immersive game that adapts to players' skill progression, enhancing replay ability and challenge.

1705. REVOLUTIONIZING PERFORMANCE MANAGEMENT: PERFORMIX SYSTEM

Project Advisor	MR. MUHAMMAD NOMAN
Status	In Process of Completion

The **Perfomix System** is a cutting-edge performance management solution designed to revolutionize the way organizations evaluate and enhance employee productivity. The platform addresses the limitations of traditional systems, which lack flexibility and fail to meet the unique requirements of different departments. Perfomix automates key performance indicator (KPI) tracking and integrates seamlessly with widely used tools like GitHub, Jira, Google Sheets, and SQL databases. By leveraging real-time anomaly detection and an NLP-based recommendation system, Perfomix provides data-driven insights and actionable feedback to foster employee development.

This project tackles the significant challenge of ineffective and rigid performance evaluation frameworks by offering a customizable, user-friendly solution. Key knowledge areas include machine learning, natural language processing (NLP), API integrations, and user experience design. The expected outcomes include a robust and scalable system that delivers real-time performance monitoring, personalized improvement suggestions, and comprehensive reporting for decision-making.

Perfomix is poised to bridge the gap between organizational performance management needs and modern technological capabilities, ensuring that organizations can adapt, grow, and empower their workforce effectively.

1706. EAZYWED: WHERE ELEGANCE MEETS JOY

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

EazyWed is a web-based wedding planning platform designed to simplify and enhance the wedding organization experience. Wedding planning often involves handling multiple vendors, tracking budgets, and managing guest lists, which can be overwhelming and time-consuming for couples. EazyWed addresses these challenges by providing a centralized platform where users can book services, receive AI-powered vendor recommendations, manage budgets in real-time, and create personalized digital wedding invitations. By using advanced algorithms and data analytics, the platform aims to streamline the process, helping users to make informed decisions with minimal stress. This project will utilize knowledge in cloud computing, artificial intelligence, and full-stack development, specifically the MERN stack (MongoDB, Express.js, React.js, Node.js). The end goal is a user-friendly system that redefines the wedding planning experience, setting new standards for the industry.

1707. THE ASCENSION (3D HORROR GAME)

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

The Ascension is a 3D horror game that blends stealth, FPS mechanics, and 4th-wall-breaking puzzles to create an immersive and innovative experience. Unlike traditional horror games dominated by predictable gameplay and jump scares, it engages players by having them solve puzzles through interactions with their own personal files, blurring the line between the virtual world and reality. At its core, the game features a rogue AI antagonist that plants clues within the player's personal data, challenging them to confront issues of privacy and data security. The narrative explores themes of AI's growing influence, the dangers of unchecked technological advancements, and the ethical dilemmas surrounding modern digital life, offering a thoughtful commentary on these contemporary concerns. Drawing on principles of game development, AI programming, and narrative design, The Ascension delivers a gameplay experience that combines entertainment with deeper reflection. Players must navigate a hostile environment using stealth and FPS elements while solving complex puzzles and managing limited resources, with the AI's evolving behaviour adding an element of unpredictability. Ultimately, The Ascension pushes the boundaries of interactive storytelling, aiming to provide a truly immersive experience that not only entertains but also challenges players' understanding of the digital world and its impact on their lives.

1708. NXTFOODS: A COMPREHENSIVE PLATFORM FOR AFFORDABLE HELATHY FOOD DELIVERY

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

In the evolving landscape of Pakistan's food industry, the demand for affordable, nutritious, and high-quality meals has grown significantly. However, the existing market lacks platforms that cater to health-conscious consumers while ensuring convenience and affordability. Traditional food

delivery platforms, such as Foodpanda, are limited to offering fast food and calorie-dense meals, leaving a critical gap in meeting dietary and nutritional needs. NxtFoods proposes an innovative solution: a subscription-based meal delivery platform designed to serve the urban population of Pakistan, primarily students, busy professionals, and families. By leveraging local resources, including home chefs, underutilized restaurant kitchens, and cloud kitchens, NxtFoods aims to offer meal plans that are not only customizable to individual dietary preferences but also cost-effective and accessible. The system will emphasize the use of fresh, locally sourced ingredients to support sustainable food practices and promote small-scale entrepreneurship. Furthermore, NxtFoods will prioritize the integration of cutting-edge technology, including a user-friendly mobile application and smart logistics solutions, to enhance the delivery process. This project represents a vital step toward addressing Pakistan's health challenges while creating a sustainable, scalable, and technology-driven food ecosystem.

1709. CORPUS AND BEURAL TRANSLATION MODEL CREATION FOR PAKSITAN SIGN LANGUAGE AND ENGLISH SENTENCE

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

This project aims to create a comprehensive corpus of parallel sentences in Pakistan Sign Language (PSL) and English, and to develop a neural machine translation model that converts English text into PSL. The project addresses a significant gap in resources for PSL translation, focusing on the unique grammatical structure of sign language and enhancing communication and accessibility for the deaf community in Pakistan. The neural model will leverage deep learning techniques and existing translation methodologies to build a robust, scalable solution. [2] The final deliverable will be a neural translation system, which can be extended to various applications such as real-time communication and educational tools.

1710. PAK CARE-LINK

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

The proposed web application addresses the inefficiencies in healthcare access and management by providing an integrated platform for patients. It allows patients to create profiles, record medical histories, search for specialized doctors and hospitals based on diseases and location, book online appointments, and access services like medical labs and pharmacies. The platform also fosters a community for patients with similar diseases and incorporates an AI chatbot for support. By streamlining healthcare processes and ensuring real-time data access, this application enhances patient care and provides valuable disease insights.

1711. CALL CARE (ONLINE CONSULTATION WITH AI BOT, PHYSICAL DOCTORS, PHARMACY INTEGRATION, AND LABORATORY SERVICES)

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

Call Care is a mobile health platform designed to provide comprehensive remote healthcare services. The platform integrates secure video consultations with licensed doctors, an AI-driven chatbot for preliminary consultations, pharmacy services for prescription management, and laboratory integrations for diagnostic tests. It addresses the fragmentation in existing telemedicine solutions, aiming to deliver

a unified, efficient, and user-friendly experience. The significance of this project lies in improving healthcare accessibility, especially in areas where physical consultations are challenging. The platform ensures compliance with healthcare regulations like HIPAA to safeguard patient data. The knowledge areas involved include mobile application development, artificial intelligence, secure video conferencing, and healthcare standards.

The expected outcomes include a scalable and reliable telemedicine solution, improving the quality of care and convenience for patients. The project contributes to advancing digital healthcare by seamlessly integrating essential services into one platform.

1712. ECOMIN SIGHT

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

This project aims to develop an AI-powered web-based application that integrates multiple core functionalities to enhance user experience and optimize product management. The application will feature a location-based product search and recommendation system, inventory management capabilities, and an AI chatbot to assist users in finding the most relevant products. The product recommendation system will utilize machine learning to suggest items based on user preferences, behaviors, and regional availability. The inventory management system will offer robust product tracking and stock updates, ensuring efficient database management.

A seamless user interface will enable users to search for products within a specific region by utilizing geolocation and proximity-based algorithms. An AI chatbot, similar to modern conversational agents, will provide personalized recommendations by engaging users in real-time, improving the decision-making process.

1713. SERVICEX: YOUR MARKETPLACE FOR SERVICE-BASED HOME SOLUTIONS

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

ServiceX is a platform aimed at solving the challenge of finding reliable home service providers like painters, tutors, and decorators by addressing issues such as outdated information, poor matching, and lack of transparency. In the project, we will create a secure and user-friendly system. Key features include verified professionals, honest reviews, a bidding system, and progress tracking. ServiceX will simplify hiring, save time for users, and enhance trust, delivering an efficient and trustworthy solution for home service needs.

1714. WASTELESS: INTELLIGENT WEB SOLUTION FOR FOOD SURPLUS

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

The Wasteless project addresses the critical global issue of food waste by creating an intelligent, web-based platform to efficiently manage and redistribute surplus food. The system is designed to connect businesses with excess food to nearby shelters and food banks, reducing food waste and providing support to food-insecure communities. Wasteless identifies surplus food based on reported inventory and enables businesses to notify nearby shelters and food banks to arrange quick pickups. This approach ensures that food reaches those in need in a timely manner, reducing the amount of waste from surplus stocks. Wasteless also supports volunteer coordination, allowing individuals to participate

in food collection and distribution. During emergencies, the platform can mobilize surplus food swiftly to support communities in crisis. Additional features include impact reporting, showcasing the social and environmental benefits of the donations, and a feedback system to continuously improve the donation process. By streamlining surplus food management and providing a reliable notification system, Wasteless creates an efficient and scalable solution for reducing food waste and addressing hunger in communities worldwide.

1715. AI SMART TASK CHAIN

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

The AI SMART TASK CHAIN project aims to revolutionize organizational task management by integrating cutting-edge technologies like blockchain and artificial intelligence (AI). It addresses common inefficiencies in task organization, transparency, and manual tracking that many companies face. By leveraging blockchain, the system ensures secure, tamper-proof task verification, eliminating the risks of unauthorized changes and enhancing accountability. The AI capabilities of the system provide intelligent task prioritization, predictive analytics, and automated task assignments, helping teams focus on high-priority tasks, prevent bottlenecks, and optimize resource allocation. This enables companies to make proactive decisions, ensuring timely project completions and improved operational efficiency. The project draws from several advanced knowledge areas, including AI for smart automation and workflow optimization, blockchain for secure task tracking, and data analytics for prediction.

Tools like Python, Web3.js, and MongoDB are used to develop the system, with modern interfaces to ensure user-friendly task management. Upon completion, companies can expect a significant improvement in productivity, streamlined workflows, and enhanced collaboration. The AI SMART TASK CHAIN is designed to bring transparency, efficiency, and smart automation into everyday business operations, redefining how organizations manage their tasks and projects.

1716. DEAL DOCKS AI CLASSIFIED

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

The Deal Docks AI Classified project aims to develop an automated platform for classified ads. Users upload 4-5 images of a product, and the system uses AI for image recognition, web scraping, and natural language processing (NLP) to automatically generate ad titles, descriptions, and pricing. The project's goal is to reduce the manual input needed to create a classified ad while ensuring competitive and accurate content by leveraging AI and machine learning (ML). A secondary service provides inspection and verification for high-value items, offering a trust badge to increase buyer confidence. The platform's AI-driven functionalities will enhance user experience and optimize ad content based on market trends.

1717. ADVENTURE SCAPE

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

AdventureScape is an innovative 360-degree virtual tour application designed to revolutionize the tourism industry. Targeted at tour advisor companies, this application provides a seamless platform for users to explore, plan, and book their journeys with ease. AdventureScape offers comprehensive

services, including hotel reservations, city-to-city tour packages eliminating the need for third-party platforms.

What sets AdventureScape apart is its integration of artificial intelligence to enhance user experience. By analyzing user inputs such as budget and preferences, the AI feature suggests tailored tour options, ensuring every trip is both memorable and economical. The application also supports immersive virtual tours, enabling users to preview destinations and accommodations in a 360-degree view before making decisions.

AdventureScape prioritizes user convenience and efficiency by streamlining the entire travel planning process into a single app. This project aims to bridge the gap between travelers and tour advisors, promoting a hassle-free and engaging tourism experience.

1718. ECO SCRAP HUB

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Eco Scrab Hub is a digital platform addressing inefficiencies in recycling by connecting waste producers and recyclers, fostering sustainability, and promoting eco-conscious behavior. It simplifies recycling with AI-driven waste categorization, real-time tracking, and logistics optimization. The cloud-based system ensures accessibility, security, and scalability, catering to households, businesses, and recyclers with tailored features. It tackles global waste challenges by integrating advanced technologies, fostering collaboration, and incentivizing sustainable practices. Revenue is generated through premium services like analytics, ensuring financial viability while supporting environmental goals. The system operates on a cloud-based infrastructure, ensuring accessibility and reliability across devices. With a focus on scalability and security, it can handle increasing user demands while protecting sensitive data through advanced encryption and compliance with international standards like GDPR. Its modular design also allows for future upgrades, enabling seamless integration of additional features or third-party APIs. One of the project's key strengths lies in its business goals, which align environmental sustainability with economic growth. The platform's user-friendly design includes intuitive dashboards to track recycling habits and optimize waste reduction efforts. Its modular architecture allows seamless integration of future upgrades and third-party APIs. By collaborating with local governments and waste management companies, Eco Scrab Hub creates a supportive ecosystem for implementation. Educational campaigns and gamified incentives motivate user participation, fostering long-term engagement. Success is measured through user satisfaction, operational reliability, and adherence to recycling regulations.

1719. SMARTCHEF

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Many people face challenges with meal planning and cooking due to limited time, lack of cooking skills, and difficulty in choosing recipes based on available ingredients. Often, individuals have a few ingredients at home, such as potatoes and carrots, but don't know what to cook with them. This project aims to develop a tool that suggests recipes based on the ingredients available and provides links to stores for any additional necessary items. By simplifying meal preparation, this tool will help reduce food waste, a growing problem caused by unused ingredients being discarded. The project will utilize areas such as recipe databases, algorithm design, and online shopping integration to deliver practical solutions.

1720. EVOHEALTH

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

The Healthcare Management System is a simple and easy-to-use online platform designed to solve the problem of patient records being scattered in different places. In many healthcare facilities, patient information is stored in different systems or paper records, making it hard for doctors and staff to access the full medical history of a patient. This system brings all the patient data together in one secure location, making it easier for authorized personnel, such as doctors, administrators, and assistants, to view and update the information. Access is granted by logging in using the patient's CNIC. The CNIC is used only to check if the patient's information already exists in the system. If it does, the doctor or assistant can easily update it with new details. If the patient is visiting for the first time, the assistant will enter all the new data into the system. For now, demo data is being used for testing purposes. The system also includes smart tools that help healthcare workers make better and quicker decisions. With real-time, accurate information, doctors can improve patient care by understanding the patient's health status instantly. It also makes hospital work more efficient by reducing unnecessary tests and procedures and making it easier to share patient details across different healthcare providers. The system is built with a focus on security, ensuring that sensitive patient information is kept safe, and on ease of use, so that healthcare staff can navigate it without difficulty. Moreover, it is designed to grow with time, meaning it can handle more users and data as the system becomes more popular and used in more healthcare centers. By centralizing all patient records in one place, the system makes it easier for doctors, nurses, and other healthcare providers to work together, improving decision-making, communication, and ultimately, patient care.

1721. STREAMLINED EMAIL CAMPAIGN MANAGEMENT FOR BUSINESS PROFESSIONALS

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

BLAST (Business Letters and Automated Strategy Tool) is a web application designed to streamline email marketing for freelancers, digital marketers, entrepreneurs, and small business owners. It integrates third-party email services for spam filtering, ensuring compliance with privacy regulations through user-sourced lead imports. BLAST eliminates reliance on unreliable AI-based web scraping and provides a user-friendly platform for personalized email campaigns.

1722. CONTAGION: THE LOST CURE

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

This project, titled Contagion: the lost cure, is an immersive, 3D survival game set in the environment of post-apocalyptic environment. This game's focus on a group of scientists, that found them self in the middle of this environment, desperately trying to develop the life-saving vaccine in a research center while being in the chaotic environment of post-apocalyptic zombies' outbreak, and there is the twist one among them is infected. The significance of this project lies in its fusing of social deduction, strategies of collaboration, keen observation, and team working.

Players have to play mini games to be able to complete the requirements of the end game. The game has special features for infector as well as for normal people who are still healthy. The aim of this project is to fill the gaps of previous apocalypse-themed games. The development will require

knowledge in game development with Unity, AI, multiplayer integration, and programming (C#). Resulting in an engaging 3D and keeping our players on edge.

1723. ENDLESS RIVER ADVENTURE

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

The gaming industry has experienced remarkable growth, particularly with the success of endless runner games like Subway Surfers and Temple Run. However, these games often lack diversity in environments and challenges, leading to player disengagement over time. To address these limitations, Endless River Adventure introduces an innovative 3D endless runner game that combines realistic boat navigation, evolving dynamic environments, and immersive gameplay mechanics.

This project leverages advanced tools such as Unity3D for development, Blender for 3D modeling, and Adobe Illustrator for UI/UX design to create a visually stunning and engaging game. With features like procedurally generated levels, adaptive difficulty, and multiple game modes—including race, battle, and multiplayer modes—the game provides a fresh and satisfying experience for casual and hardcore gamers alike.

The project aims to redefine the endless runner genre by incorporating strategic challenges, competitive multiplayer functionality, and visually rich environments inspired by real-world physics and aesthetics. The final product will serve as a benchmark for innovation in game design, offering replay ability, player progression, and a seamless gaming experience across mobile and PC platforms.

1724. LINGO FUSION WITH NATURAL LANGUAGE PROCESSOR USING LIVE STREAMING

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

The new mobile application Lingo Fusion uses modern Speech-to-Text and Natural Language Processing (NLP) technology to provide instantaneous interactions with native speakers, thus solving the major gaps in traditional language instruction. This program aims to address issues such as limited cultural comprehension, poor pronunciation feedback, and insufficient conversational fluency. Through the combination of real-time speech recognition, NLP-powered translation, and culturally relevant insights, Lingo Fusion enables users to develop their language skills in a fun, immersive environment. Lingo Fusion's significance lies in its ability to provide an interactive learning environment that goes beyond conventional methods and allows users to engage in context-focused, real-time conversations with native speakers. In addition to improving language proficiency, this curriculum bridges cultural gaps by developing an awareness of common phrases and social aspects that are sometimes absent from traditional language learning. Key expertise areas used in this project include cross-platform deployment methods, speech-to-text APIs, machine learning approaches for natural language processing, mobile app development (Flutter), and real-time communication techniques. The project ensures extensive language support and accuracy by combining Kaggle and Google datasets for language processing. Improved pronunciation, increased conversational fluency, and a deeper understanding of cultural settings are the expected results of Lingo Fusion. Through this platform, language learners will be able to participate with assurance and success, promoting global connections and cross-cultural communication.

1725. GEAR GUARDIAN

Project Advisor	MR. SYED M. MUJTABA HASSAN
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Status	In Process of Completion
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The GearGuardian project aims to address the challenges faced by drivers during vehicle-related emergencies by developing a comprehensive mobile application for roadside assistance. It focuses on providing quick and reliable solutions such as connecting users with nearby service providers for issues like flat tires, fuel shortages, or breakdowns. The app will leverage geolocation services, enable real-time tracking, and include a panic button for enhanced safety by alerting emergency contacts during critical situations.

It incorporates advanced knowledge of cross-platform technologies like Flutter, backend development with Firebase, and integration of APIs such as Google Maps. The project's deliverables include a fully functional app offering free and premium tiers to cater to diverse user needs, a robust rating.

1726. AUTOMATED CLASSIFICATION OF LUMBER SPINE DEGENERATIVE CONDITION USING DEEP LEARNING

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

Lumbar spine degenerative conditions, such as spinal canal stenosis, neural foraminal narrowing, and subarticular stenosis, are leading causes of chronic back pain and disability, requiring accurate diagnosis to guide effective treatment. The manual interpretation of MRI scans for these conditions is time-consuming, prone to variability, and subject to human error. This project aims to address these challenges by leveraging deep learning techniques to automate the classification of degenerative conditions across multiple vertebral levels (L1/L2 to L5/S1) and severity levels (Normal/Mild, Moderate, Severe). The approach integrates expertise in machine learning, data preprocessing, and medical imaging to develop a system that enhances diagnostic speed and accuracy. The expected outcome is a reliable and efficient tool to support radiologists, reducing diagnostic variability and improving patient care through consistent, AI-powered evaluations.

1727. POINT OF SALES SYSTEM (POSS)

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

This Point of Sale (POS) system project focuses on streamlining retail and sales management by automating key business operations such as inventory control, sales tracking, and performance analysis. The project addresses inefficiencies in manual sales systems, including inaccurate stock updates and limited insights into business metrics. By leveraging technologies like Angular, .NET Core, and AI, this system provides advanced features, including automatic inventory updates, low-stock alerts, AI-based sales predictions, and dynamic pricing. The solution aims to enhance operational efficiency, provide actionable insights, and empower businesses with scalable, multi-channel usability.

1728. SHADOWED REMAINS

Project Advisor	MR. UMAR RANA
Status	In Process of Completion

Shadowed Remains is a first-person single-player horror game designed to immerse players in a spine-chilling investigative journey. Set within haunted houses brimming with paranormal activity, the game challenges players to uncover and cleanse these supernatural spaces. The core problem addressed is the lack of deeply interactive and story-driven horror games that leverage real-time AI communication for

dynamic gameplay. This project combines advanced 3D modeling, immersive sound design, and AI-driven mechanics to create an engaging and realistic horror experience. The game employs tools such as Unreal Engine, Blender, and Adobe Fuse, alongside C++ programming, to deliver a seamless blend of atmospheric storytelling and strategic problem-solving. Players will interact with ghosts using their microphone, elevating the sense of unpredictability and tension. "Shadowed Remains" seeks to redefine the horror genre by integrating innovative gameplay elements with cinematic realism, offering an unforgettable gaming experience.

1729. AGRI CONNECT AI

Project Advisor	MR. USAMA PERVAIZ
Status	In Process of Completion

AgriConnectAI is a comprehensive AI-driven solution designed to revolutionize Pakistan's agricultural sector through the integration of mobile and web platforms. The system addresses inefficiencies such as middlemen reliance, poor crop management, and post-harvest losses by empowering farmers with direct access to buyers, AI-powered tools, and optimized logistics.

The platform enables farmers to sell their produce directly to buyers, fostering market transparency and boosting profitability. It offers intelligent tools for disease detection, personalized crop recommendations, and logistics optimization, ensuring timely delivery of high-quality produce.

By leveraging advanced AI methodologies and user-friendly mobile technology, AgriConnectAI provides a comprehensive solution to enhance agricultural productivity, reduce waste, and create a sustainable and profitable ecosystem for all stakeholders in Pakistan's agricultural sector.

1730. SECURE VOTING SYSTEM USING BLOCKCHAIN TECHNOLOGY

Project Advisor	MR. USAMA PERVAIZ
Status	In Process of Completion

This project aims to revolutionize the voting process by addressing fundamental flaws in traditional voting systems through the integration of blockchain technology. Traditional voting systems, whether paper-based or electronic, face significant challenges including susceptibility to fraud, lack of transparency, and inefficiency. These issues can erode public trust in the democratic process. Our blockchain-based voting system proposes a solution by leveraging the inherent characteristics of blockchain technology—immutability, transparency, and decentralization—to create a secure and reliable voting environment. By recording each vote on a blockchain, we ensure that votes are permanently and tamper-proofly recorded, thereby addressing key vulnerabilities of traditional systems.

The core of our solution involves utilizing advanced cryptographic techniques and secure multi-factor authentication to verify voter identity while preserving anonymity. Voters will undergo a robust registration process that includes fingerprint verification and email or phone validation. Once registered, each voter receives a private key to cast their vote securely. Each vote is then recorded on the blockchain with a unique hash ID, allowing voters to verify their vote independently. This approach not only prevents vote duplication but also ensures that all records are tamper-proof. Real-time vote tallying and result verification are made possible through the blockchain, providing immediate and transparent access to voting results.

The project harnesses key technologies such as blockchain architecture, cryptography, and smart contracts, with practical tools like Ganache for blockchain simulation and traditional databases for voter registration. This combination ensures that the voting system is scalable, secure, and resistant to

potential threats. By integrating these technologies, the project aims to create a voting system that enhances security, boosts voter confidence, and ensures transparency. The ultimate goal is to establish a verifiable and immutable voting record that can serve as a model for future elections, offering a more secure, transparent, and cost-effective approach to democratic voting processes.

1731. DROWSINESS DETECTION SYSTEM

Project Advisor	MR. USAMA PERVAIZ
Status	In Process of Completion

The Driver Drowsiness Detection System aims to mitigate road accidents caused by driver fatigue through a vision-based approach. The system uses a camera to monitor the driver's eye state and applies algorithms such as Haar Cascade Classifier and Convolutional Neural Networks (CNN) to detect drowsiness. If drowsiness is detected, an alarm is triggered to alert the driver. The system's limitations include dependency on camera quality, lighting conditions, and processing delays in real-time scenarios.

1732. PRREMPITIVE HEALTH

Project Advisor	MR. USAMA PERVAIZ
Status	In Process of Completion

Healthcare systems face significant challenges in providing timely, accurate, and accessible diagnostic support to users. This project addresses the critical issue of delayed and imprecise diagnoses by leveraging AI-driven solutions to enhance user health management. The core problem revolves around the lack of accessible tools for individuals to evaluate their symptoms, detect conditions like pneumonia through imaging, and find suitable healthcare professionals. The project integrates advanced knowledge areas such as artificial intelligence, deep learning, and intelligent data processing. Using these technologies, the system aims to provide features like AI-powered symptom assessment, X-ray analysis for pneumonia detection, and a searchable database for healthcare providers. The inclusion of predictive models ensures that users receive reliable health recommendations tailored to their inputs. By creating a user-friendly, scalable, and secure platform, the project seeks to empower users with accessible healthcare tools while maintaining compliance with data privacy standards like HIPAA and GDPR. The expected results include improved diagnostic accuracy, reduced healthcare accessibility barriers, and enhanced decision-making for both users and administrators. This solution aligns with the broader goal of utilizing technology to improve global health outcomes.

1733. AI-DRIVEN PERSONAL FINANCE MANAGEMENT SYSTEM

Project Advisor	MR. USAMA PERVAIZ
Status	In Process of Completion

This project focuses on designing an AI-Driven Personal Finance Management System to support its users in keeping track of their personal finances. It makes use of AI algorithms, predicting cash flows and creating personalized insights on spending habits, forecast of future needs, and suggestions for saving money. The general objective will be to help users make better financial decisions, avoid unnecessary expenses, and optimize savings. The features include integrating the machine learning models with real-time data collection to offer an intuitive, user-friendly interface for visualization of financial health and tracking of financial goals.

1734. TAILORED NEWS DIGEST

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

Tailored News Digest is an innovative AI-powered news aggregation app designed to revolutionize the news consumption experience. By leveraging advanced Natural Language Processing (NLP) and machine learning, the app delivers a highly personalized and context-aware news feed tailored to user preferences and emotional responses. The app supports English and Urdu, offering multilingual AI-driven summaries for quick comprehension. Features like a gamified points system for accessing premium content, voice-assisted summaries, and contextual recommendations distinguish the app, ensuring inclusivity and user engagement.

1735. MATH SCRIBE

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

"MathScribe" is a mobile app that enables users to solve complex mathematical equations, especially in calculus, through handwriting recognition. Using Artificial Neural Networks (ANN), the app interprets handwritten equations, provides solutions in real-time, and generates graphs. This project addresses the gap in current educational tools that lack intuitive interfaces for advanced calculations and visualizations. Key technologies include Machine Learning, Mobile App Development (React Native), and Cloud Integration (Firebase). The app aims to enhance learning and productivity by offering a seamless, touch-based solution for solving math problems.

1736. ATTENTIONS DEFICIT HYPERGUARD DISORDER (ADHD)

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

This project aims to develop a machine learning model for accurate classification of Attention Deficit Hyperactivity Disorder (ADHD). The significance of this problem lies in the fact that ADHD is a prevalent neurodevelopmental disorder affecting millions of individuals worldwide, and timely diagnosis is crucial for effective treatment and management. The project leverages knowledge areas in machine learning, data analysis, and neuroscience to develop a robust classification model. Specifically, a Random Forest Classifier is proposed to handle high-dimensional ADHD datasets, robust to noise and outliers, and providing interpretable results. The expected outcome is a model that can accurately classify ADHD cases with high precision and recall, contributing to improved diagnosis and treatment strategies. The project's results will have significant implications for the healthcare industry, enabling early intervention and personalized treatment for individuals with ADHD.

1737. LEARNY MATION

Project Advisor	MR. ZEESHAN AKRAM
Status	In Process of Completion

LEARNY MATION is an AI-powered educational website that aims to revolutionize early childhood education for children aged 2-8. Traditional educational methods struggle to engage young learners and fail to adapt to their individual needs. LEARNY MATION solves these challenges by delivering

personalized learning experiences through AI-driven algorithms, animated stories, gamified activities, and interactive quizzes.

To further enhance the learning process, LEARNY MATION integrates with an external online store that provides educational gadgets, enabling users to access physical tools that complement the web-based learning experience. By leveraging cutting-edge technologies such as TensorFlow for personalization, ReactJS for frontend development, and Node.js for backend operations, the platform ensures security, scalability, and adaptability.

The project's primary focus is to provide a secure, engaging, and dynamic educational environment for young learners while empowering parents and educators with tools to monitor progress. By addressing the limitations of traditional teaching methods, LEARNY MATION aspires to make early learning both effective and enjoyable.

1738. AN AI-DRIVEN PLATFORM FOR LEGAL ASSISTANCE IN DOMESTIC VIOLENCE CASES

Project Advisor	MR. ZEESHAN AKRAM
Status	In Process of Completion

AdvocatePlus is an AI-powered web platform developed to support victims of domestic violence by providing comprehensive and accessible legal assistance. The platform offers personalized legal advice through an AI-driven chatbot and facilitates real-time consultations with professional lawyers, ensuring timely legal support. AdvocatePlus features a dual-user interface catering to both victims and observers, along with multilingual accessibility in English and Urdu. The platform also includes a library dashboard where users can access case studies relevant to domestic violence, helping victims understand their cases and plan their next steps. Additionally, it provides location-based information on shelters and NGOs, bridging the gap between traditional legal services and essential humanitarian support. This project aims to empower users with immediate, user-friendly, and reliable legal aid while prioritizing data privacy and user confidentiality.

1739. POULTRY GUARDIAN

Project Advisor	MR. ZEESHAN AKRAM
Status	In Process of Completion

The Poultry Guardian project is an AI-based platform that improves disease diagnosis and management on poultry farms. The project applies OpenCV for image preprocessing, MySQL for the database, Figma for design, HTML and CSS for the user interface and FastAPI with Python as the server end.

The poultry farmers can share pictures of the sick hens and will check mark some physical conditions in the check boxes; the system has algorithms which will process the images and detect the diseases also prescribe the medication. This reduces the propagation of the diseases and economic losses. Poultry Guardian Project also has a virtual market place; the users can sell or purchase hens, drugs and other accessories; this makes the poultry system integrated and efficient.

By utilizing AI-enabled disease detection along the trade, Poultry Guardian advances a one stop solution for poultry farm improvement, encourages fast, budget friendly and environmentally friendly approaches and resolves important issues within the poultry sector.

1740. AI-DRIVEN SALES CALL SYSTEM

Project Advisor	MR. ZEESHAN AKRAM
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Status	In Process of Completion
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AI-Driven Sales Call System aims to replace human sales agents with an automated system capable of handling outbound sales calls. Using an AI-powered conversational engine, the system will engage with customers, present services, and capture their responses. This solution will enhance efficiency in call centers by automating customer outreach and reducing operational costs. Integration with AI-driven speech recognition and generation services ensures a human-like conversational experience, while the system logs customer responses in a database for future analysis.

1741. ADPAY

Project Advisor	MR. ZEESHAN AKRAM
Status	In Process of Completion

AdPay is an innovative cross-platform mobile and web application designed to transform the landscape of ad engagement. It offers users the opportunity to earn digital currency by watching advertisements, which can then be seamlessly converted into Pakistani Rupees (PKR), creating a tangible and rewarding incentive. By leveraging cutting-edge blockchain technology, AdPay guarantees secure and transparent transactions, while enhancing the overall user experience. This project addresses the key limitations of traditional advertising, where low engagement and poor return on investment (ROI) are common, offering a modern solution that benefits both users and advertisers alike.

1742. UNIVERSITY PORTAL WITH FYP MANAGEMENT SYSTEM

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

The "UNIVERSITY PORTAL WITH FYP MANAGEMENT SYSTEM" aims to streamline and enhance the management of final year projects for students and faculty. Universities often struggle with inefficiencies in matching students to suitable advisors, fostering collaboration, and managing communication, which leads to project delays and reduced project quality. This system addresses these challenges by offering a centralized platform for students to browse advisors based on their domain expertise, request guidance, and collaborate on project proposals in real time. Advisors can accept, reject, or chat with students before finalizing a group, which includes integrated audio-video meeting options and a document collaboration tool.

The system introduces innovative features like AI-driven feedback, allowing students to receive automated evaluations on the acceptance likelihood of their project ideas. Built on a robust technology stack (Django, Flutter, and MongoDB), the system ensures seamless user authentication, role management, progress tracking, and academic management tools. Additionally, it integrates AI-powered chatbots to enhance decision-making and streamline proposal submissions. This project not only simplifies the advisor-student interaction but also improves communication, collaboration, and project outcomes, benefiting both students and faculty by offering a comprehensive academic management solution. The anticipated result is a higher satisfaction rate among users, better project quality, and more efficient handling of final year projects.

1743. E-TradeXpert

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

E-TradeXpert is an advanced eCommerce platform designed to revolutionize the buying and selling experience, particularly in the automotive sector. It integrates a specialized car auction system, an AI-driven recommendation chatbot, a token-based reward mechanism, and a community blog to enhance user engagement and personalization.

This project addresses inefficiencies in traditional eCommerce platforms, such as limited personalization, lack of incentive systems, and absence of community-driven feedback loops. By leveraging modern technologies like React.js, Node.js, TensorFlow, and Firebase, E-TradeXpert ensures a scalable, secure, and user-friendly solution. The project's outcomes will include hands-on experience with full-stack development, AI integration, and creating user-centric systems.

1744. EMOTION SENSE

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

Emotion Sense is a real-time emotion recognition system designed to analyze text and audio data. The system aims to address the growing need for accurate and efficient emotion detection in various applications, such as customer service, mental health monitoring, and social media sentiment analysis. The significance of this project lies in its potential to provide insights into human emotions, enabling organizations and individuals to respond appropriately and improve relationships. The system utilizes natural language processing (NLP), machine learning (ML), and signal processing techniques to recognize emotions from text and audio inputs. The project focuses on developing a robust and scalable system that can handle various types of text and audio data. The system's architecture includes data preprocessing, feature extraction, emotion classification, and result visualization. The knowledge areas employed in this project include NLP, ML, signal processing, and human-computer interaction. A real-time emotion recognition system capable of analyzing text and audio data. A comprehensive evaluation of the system's performance using various metrics, such as accuracy, precision, and recall. An analysis of the system's scalability and robustness in handling large volumes of data. A user-friendly interface for visualizing emotion analysis results. The successful completion of this project will contribute to the development of more accurate and efficient emotion recognition systems, ultimately leading to improved human-computer interactions and more effective decision-making in various applications.

1745. PHARMA EXPRESS

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

The "Pharma Express" project addresses the critical issue of limited access to pharmaceutical services in underserved areas of Pakistan. This gap often leads to delays in obtaining essential medications, particularly during emergencies, posing severe risks to public health. The proposed solution integrates a streamlined platform connecting customers, pharmacies, and delivery systems to ensure timely and reliable access to medications.

Pharma Express incorporates key functionalities such as online medication ordering, pharmacy management, real-time inventory tracking, and an efficient emergency response mechanism. By leveraging advanced technologies, including a centralized database and GPS-enabled logistics, the platform provides users with the convenience of selecting and receiving medications promptly, while pharmacies benefit from improved inventory and order management.

The project draws on expertise in healthcare informatics, supply chain optimization, and software development to create a scalable and user-friendly system. Expected outcomes include reduced delays in medication delivery, enhanced pharmacy operations, and a reliable process for handling emergency

requests. Ultimately, Pharma Express aims to improve patient health outcomes and contribute to a more efficient and accessible pharmaceutical service infrastructure in Pakistan.

1746. ECOCATALYST: ACCELERATING GREEN DECISIONS

Project Advisor	MS. BEENISH ZAFAR
Status	In Process of Completion

EcoCatalyst is a mobile app to help people make better sustainable choices every day. This app fills the data void left by the lack of tools for consumers to make educated, eco relevant decisions. However, this business is important in light of global climate change and responsibility in consumption.

Key features of the app include a **Product Sustainability Scanner** that instantly scans products and barcodes and provides scores based on carbon footprint, packaging and ethical production practice. The app includes an **Eco-Friendly Alternative Suggester** that takes into account the user's preference and activity, and suggest the most eco-friendly alternative. Also, EcoCatalyst provides its user with a **Carbon Footprint Tracker** to enable the user to track and lessen their ecological impact. These features are complimented by the **AI Based Diet Plan** Chatbot that generates personalized balanced nutrition and environmental meal plans.

The project employs a number of state-of-the-art technologies including **image recognition** for objects and barcode scanning, **machine learning** for personalized recommendation, and **AI based chatbots** for dynamic diet planning. It also introduces Integration of Machine Learning models using **TensorFlow lite**, image recognition using **OpenCV**, user authentication and data management using **Firebase**.

By aggregating these functionalities into one holistic, user-friendly solution, we seek to enhance user engagement with sustainability, its business acceptance and its lowest carbon footprint. Thus, it is expected that a greater proportion of informed green decisions, a potential tangible impact on the environment at the consumer level, will be realized.

1747. RESIPRO SOCIETY MANAGEMENT SYSTEM

Project Advisor	MS. BEENISH ZAFAR
Status	In Process of Completion

ResiPro is designed to address the complex management needs of residential housing societies by offering a comprehensive, integrated system. The project aims to streamline financial management, enhance resident engagement, and improve resource allocation through a unified web and mobile application. Utilizing modern technologies like the MERN stack and Flutter, ResiPro ensures efficient data management, secure transactions, and scalable solutions. This project will result in improved administrative efficiency, better resident satisfaction, and a scalable system suitable for growing communities.

1748. FESBER'S ENFORCERS

Project Advisor	MS. FAIZA KHADIM
Status	In Process of Completion

Fesber's Enforcers is a top-down space rogue-lite game that brings a fresh approach to the genre through its innovative crew-based mechanics. Players lead a bounty hunter squad, each member possessing distinct skills, on a mission across dangerous galaxies. The game addresses the genre's common limitation of disengaged non-active characters by introducing a tactical support system,

allowing non-selected crewmembers to contribute meaningfully during missions. This system enhances strategy and teamwork, adding a unique layer of depth to the gameplay.

The game is set in procedurally generated environments, offering high replay ability with dynamic challenges in every play through. Permadeath mechanics heighten the stakes; ensuring players carefully strategize their decisions. Additionally, the multiplayer co-op option allows two players to team up, making the game even more interactive and collaborative.

At its core, the narrative revolves around the uncovering of a powerful Crime Syndicate and the personal quest of the protagonist, Fesber, to avenge his brother's death. The storyline unfolds through engaging missions, boss battles, and dynamic character interactions, seamlessly blending storytelling with gameplay.

Fesber's Enforcers leverages cutting-edge game development techniques, including Unity3D for dynamic visuals, procedural generation for diverse missions, and robust multiplayer synchronization for smooth co-op play. This combination of innovative mechanics, strategic depth, and immersive storytelling creates a compelling space adventure for fans of the rogue-lite genre.

1749. ECHOES OF TIME

Project Advisor	MS. FAIZA KHADIM
Status	In Process of Completion

"Echoes of Time" is an immersive time-travel adventure game that blends 2D and 3D gameplay elements. The protagonist embarks on a journey through six distinct levels, each set in a different era, ranging from the 1980s to 2030. It combines various genres, including 2D platforming, space shooting, hybrid exploration, high-speed running, and first-person shooting, culminating in an epic 3D boss battle. The player must collect magical crystals to defeat the villain and return to their original timeline. Throughout the adventure, the player faces a variety of enemies and challenges while being rewarded with extra points, power-ups, extra lives, and new weapons. These rewards enhance the player's abilities and progress, offering an engaging and dynamic gameplay experience. The combination of unique time-travel mechanics, diverse gameplay styles, and a robust reward system ensures a fresh and captivating experience across each level.

1750. SMARTCHAT: A PRIVACY-FOCUSED, AI-ENHANCED EDUCATIONAL CHAT APPLICATION

Project Advisor	MS. FAIZA KHADIM
Status	In Process of Completion

Much like how WhatsApp Business transformed business communication with tailored features, SMARTCHAT is an innovative mobile application designed to revolutionize educational environments. Focused on secure communication, enhanced privacy, and AI-powered learning tools, SMARTCHAT offers a comprehensive platform for students and educators to collaborate and manage academic resources effectively. Unlike generic messaging applications, SMARTCHAT integrates group messaging with advanced privacy controls, such as restricted direct messaging, hidden phone numbers for group participants (except admins), and custom acknowledgment features for important notifications. These tools ensure a safe and focused communication space tailored to the needs of the educational sector.

Leveraging artificial intelligence, SMARTCHAT introduces learning tools that support academic excellence. Its features include topic-based book interactions with the ability to engage directly with authors through dedicated chat channels for specific books, allowing students to gain deeper insights into course materials. The app also provides organized course material folders for seamless resource management. Additional functionalities, such as assignment reminder

templates and automatic silent mode activation during lectures, streamline educational processes while reducing distractions and improving focus.

SMARTCHAT addresses critical challenges in education by prioritizing privacy, enhancing student engagement, and promoting efficient resource organization. By offering a secure, intelligent, and user-friendly platform, it sets a new standard for educational communication and learning. As WhatsApp Business tailored its solutions to meet the demands of businesses, SMARTCHAT aspires to redefine how technology supports education, bridging the gap between traditional learning methods and modern technological advancements.

1751. ARTIFY PRINT

Project Advisor	MS. HINA TAHIR
Status	In Process of Completion

Artify Prints is a platform that transforms custom printing by enabling real-time 2D/3D design customization, previews, and collaboration between users, designers, and manufacturers. It addresses current limitations like poor communication, lack of design visualization, and inefficiencies.

Using AI for design suggestions, machine learning for optimization, and sustainable production, Artify offers an intuitive interface. The backend runs on ASP.NET with SQL for scalable data management, while the mobile app is built with React Native. The platform aims to provide a secure, user-friendly experience, promoting personalized shopping and eco-friendly practices.

1752. TELE JOB MONITORING SYSTEM

Project Advisor	MS. HINA TAHIR
Status	In Process of Completion

The Tele Job Monitoring System streamlines remote workforce management by integrating task assignment, performance tracking, and communication tools into a single platform. It replaces separate solutions like Zoom and Slack with features such as time logging, activity monitoring (screenshots, app usage), and communication tools (chat, video conferencing, email). Virtual meeting rooms support client and manager collaboration, while detailed reporting ensures accountability and productivity. This system enhances team efficiency, communication, and overall remote work performance.

1753. COMMENT ANALYZER WEBSITE

Project Advisor	MS. HINA TAHIR
Status	In Process of Completion

In the modern digital landscape, user comments on platforms like YouTube and Reddit provide valuable insights into audience sentiments, ranging from positive to negative and neutral. However, the manual analysis of this vast, multilingual, and often spam-laden data is both time-consuming and prone to inaccuracies. The Comment Analyzer Website aims to overcome these challenges by delivering an AI driven solution for sentiment analysis. This platform will not only classify comments into sentiment categories but also identify frequently used words and phrases, as well as track likes and dislikes on comments across various video platforms.

1754. AR-BASED E-COMMERCE PLATFORM

Project Advisor	MS. HINA TAHIR
Status	In Process of Completion

The AR-Based E-Commerce Platform aims to enhance online shopping by integrating Augmented Reality (AR) across product categories like jewelry, sports, furniture, and electronics. Each category will feature at least three AR models, allowing customers to visualize products in their environment before purchase. The platform also includes voice search, based on reviews, and a chatbot for order tracking. This project addresses the need for more interactive and immersive shopping experiences, boosting customer confidence and reducing returns. By leveraging AR, voice technology, and AI, the platform will offer a personalized shopping journey and improve customer engagement and conversion rates.

1755. AUCTO CRYPT

Project Advisor	MS. IQRA TARIQ
Status	In Process of Completion

Auctocrypt is a transformative two-way bidding system designed to automate and streamline the procurement and sales processes in universities and other organizations. It addresses the inefficiencies of traditional, manual methods by introducing automation and transparency. The system enables universities to post their needs or surplus items for sale, while registered vendors and buyers submit proposals and quotations. This competitive environment ensures optimal pricing and efficiency. Unlike existing platforms, Auctocrypt is tailored to meet the specific needs of universities, providing a seamless and transparent process for both procurement and sales. By automating these processes, the system reduces administrative burdens, minimizes human error, and enhances accountability. The ultimate goal of Auctocrypt is to revolutionize university operations by offering a more reliable and organized approach to managing procurement and surplus goods, leading to cost savings and operational improvements. The project is expected to deliver improved efficiency, better control over pricing, and enhanced transparency, contributing to more effective institutional management.

1756. NEXUS GUARD

Project Advisor	MS. IQRA TARIQ
Status	In Process of Completion

Nexus Guard is a family-focused Android application designed to enhance safety, streamline communication, and simplify event management. The app integrates features like real-time location tracking, SOS alerts, and geo-fencing while maintaining robust privacy controls. By consolidating these functionalities into a single tool, Nexus Guard addresses the inefficiency of using multiple, non-integrated platforms for family management. Built with Firebase, Google Maps API, and secure communication protocols, the app prioritizes seamless functionality, security, and user-friendly design. Nexus Guard aims to provide a comprehensive solution for modern family needs, ensuring better safety, connectivity, and organization in daily life.

1757. CSSSUCCESSPATH

Project Advisor	MS. MAHRUKH BATOOOL
Status	In Process of Completion

The **CSS Success Path** project is a transformative online platform tailored to assist aspirants preparing for the English (Precis & Composition) section of the Central Superior Services (CSS) exam. It addresses significant gaps in existing preparation resources, including a lack of personalization, inadequate feedback mechanisms, and fragmented study materials. By leveraging advanced technologies such as AI, machine learning, and a robust database of past exam papers, the platform

delivers tailored mock tests, instant grading, and predictive analytics for exam readiness. The project aims to enhance user engagement with features like an AI-driven chatbot for personalized test generation, automated feedback on mock tests, and a user-friendly dashboard displaying performance metrics and study recommendations. The significance of this platform lies in its ability to centralize resources and provide structured, adaptive learning experiences, ultimately increasing the success rate of CSS aspirants. Key knowledge areas include artificial intelligence, database management, web development, and predictive analytics. The anticipated results include an enhanced study process, improved user readiness, and targeted preparation strategies. This project strives to redefine traditional exam preparation approaches by integrating innovative technological solutions and user-centric design.

1758. MULTILINGUAL E-LEARNING PLATFORM

Project Advisor	MS. MAHRUKH BATTOOL
Status	In Process of Completion

This project involves the development of a multilingual e-learning Platform that provides educational content in languages, aiming to bridge the language gap and enhance access to quality education for diverse linguistic communities. The Platform will feature an intuitive user interface that allows users to select their preferred language seamlessly, facilitating an inclusive learning environment. It will offer a range of interactive learning materials, including video lectures, quizzes, tailored to the local curriculum and varying educational levels.

The platform will support personalized learning experiences through features such as progress tracking, performance analytics, leaderboard and adaptive learning paths. The ultimate goal is to create a versatile and accessible online learning platform that empowers users with different linguistic backgrounds to achieve their educational objectives effectively.

1759. DEALX: AN ALL-IN-ONE MOBILE APP THAT DEALS IN BUYING, SELLING, BIDDING AND RENTING OF GOODS

Project Advisor	MS. MAHRUKH BATTOOL
Status	In Process of Completion

Present day platforms are scattered with lots of apps, forcing users to switch between different apps, which is only inefficient and inconvenient. DealX is an all-in-one mobile app to make the process of trading of things across various categories like electronics, autos, home furniture and real estate easy. DealX removes this by combining them all into one platform that has AI derived features such as Chatbot for support and Google lens [7] for visual search. The app is built using Flutter [3] and is backed by Firebase [10] to guarantee a safe transaction, real time bidding and a smooth user experience. The project implements the most important areas of usage mobile development, database control and AI integration, providing reliable, flexible solutions. Current weaknesses in existing systems will be resolved and will be increased market access, customer satisfaction and transaction security.

1760. NUTRICARE PRO

Project Advisor	MS. MARIA NAZIR
Status	In Process of Completion

NutriCare Pro is an innovative web application designed to address the growing challenge of poor dietary habits and nutrition awareness in Pakistan. The platform collects users' health data, including metrics such as age, weight, height, and fitness goals, to generate personalized diet plans. These plans

focus on incorporating locally available food items to ensure cultural relevance, accessibility, and cost-effectiveness.

The application bridges the gap between nutrition guidance and practical implementation by providing features such as meal tracking, progress monitoring, and tailored recommendations based on user health data. NutriCare Pro aims to promote healthier lifestyles through evidence-based diet planning while addressing the unique dietary habits and food availability in the Pakistani context. Ultimately, the application seeks to contribute to public health improvements by offering an accessible and practical solution for achieving balanced nutrition.

1761. SMART STUDY COMPANION

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

The Smart Study Companion is an AI-powered educational platform aimed at addressing inefficiencies in exam preparation for school and college students. Traditional study resources, such as past papers, practice questions, and instructional videos, are often scattered and difficult to access in one centralized location. This project proposes a solution by integrating these resources into a unified platform, designed to offer a personalized learning experience.

The platform will utilize advanced AI technologies such as Natural Language Processing (NLP) [1], Large Language Models (LLM), and Retrieval-Augmented Generation (RAG) to dynamically generate educational content tailored to individual student needs [2]. Key features include the integration of past papers, unsolved MCQs, and instructional videos, alongside a robust progress tracking system that provides analytics on performance. The system aims to enhance student engagement, improve educational outcomes, and streamline the study process through an intuitive mobile application.

By centralizing these resources and providing AI-driven feedback, the Smart Study Companion addresses significant gaps in current educational tools, offering a smarter and more efficient approach to exam preparation.

1762. ECO STAY: SUSTAINABLE HOSTEL LIVING

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

The project **Eco Stay: Sustainable Hostel Living** aims to revolutionize hostel management for students in Pakistan by addressing challenges such as food quality, hygiene, financial transparency, and social integration. Using advanced technologies like facial recognition and AI-powered recommendations, the app offers features such as meal customization, online payments, hygiene management, and community-building tools. This project seeks to streamline hostel operations and create a secure, engaging living environment for students.

1763. SMART FREIGHT PORTAL

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

The Smart Freight Portal is a web-based platform designed to optimize logistics and freight management using AI-driven tools. It addresses inefficiencies like underutilized truck capacity, manual processes, and route optimization challenges. The system offers real-time shipment tracking, automated documentation, dynamic pricing, and seamless communication among stakeholders. By enhancing decision-making and improving resource utilization, the portal

ensures cost efficiency, scalability, and compliance, creating a transparent and innovative logistics ecosystem.

1764. SMART FOOD RECOMMENDATION SYSTEM USING AI

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

The Smart Food Recommendation System AI is a cutting-edge technology that will revolutionize how people choose their meals by providing incredibly customized and flexible meal recommendations. To provide personalized recommendations, the system analyzes user inputs including dietary preferences, accessible ingredients, medical problems, and cultural cuisines using artificial intelligence and machine learning. Through clever meal planning, this dynamic method seeks to reduce food waste, support a variety of dietary preferences, and encourage healthier eating habits.

The system incorporates cutting-edge technology including JavaScript for an easy-to-use, interactive web interface, TensorFlow for machine learning, and Python for backend data processing. Fitness enthusiasts who need calorie-conscious solutions, people with dietary limitations (such as non-diabetic or diabetic), and homes trying to maximize ingredient utilization are just a few of the varied customer groups it serves.

Real-time feedback adaptation, nutritional information, configurable dietary choices, and recipe filtering by protein, fiber, or calorie counts are some of the key features. The platform also promotes sustainability by reducing food waste and needless grocery buying.

While addressing the shortcomings of current systems such as Yummly and MyFitnessPal, the suggested approach combines user input integration, dynamic flexibility, and customization in a novel way. The ultimate objective is to offer a fun user experience that helps customers reach their nutritional and health objectives while also making meal planning easier.

The goal of this all-inclusive method is to make meal planning a sustainable and pleasurable pastime. The project also emphasizes how crucial security, scalability, and adherence to moral AI guidelines are to ensuring consumers' confidence and dependability.

1765. AI-DRIVEN TRAFFIC FLOW OPTIMIZER

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

The AI-Driven Traffic Flow Optimizer is designed to create a smarter traffic management system by using YOLOv8 (You Only Look Once, Version 8) to analyze real-time traffic footage and optimize signal timings. The system detects and classifies vehicles, pedestrians, and emergency vehicles, allowing it to adjust signal phases dynamically based on traffic density and prioritization needs. By harnessing the power of Artificial Intelligence and IoT (Internet of Things), this project aims to streamline traffic flow, reduce congestion, and improve response times for emergency vehicles. This approach not only makes traffic systems more efficient but also enhances the overall experience for road users. This document delves into the process of integrating and training the YOLOv8 model, along with its practical application in dynamic traffic control. Through this advanced AI-driven solution, the project addresses common urban traffic challenges with a focus on creating more adaptive and responsive traffic management systems.

1766. SMARTFLEX POWERHUB: THE ULTIMATE PORTABLE EXTENSION BOARD WITH ADVANCED SAFETY AND VERSATILE FEATURES

Project Advisor	MS. MISHA ASIF
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Status	In Process of Completion
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A portable extension board designed to provide safe and reliable power for home, office, and travel. With a compact design and a powerful 30,000mAh battery, it ensures backup power when needed and includes an Earth Leakage Circuit Breaker (ELCB) for added safety. The extension board comes with a mobile app that lets users monitor energy use, set schedules, and control the board through voice commands. This makes it especially valuable for travelers or for anyone wanting to manage home office devices from a distance. The goal is to make power management easier, safer, and more efficient, making this extension board a helpful tool for everyday users.

1767. DYNAMIC EMOTION-BASED FILM ADVISOR (DEF ADVISOR)

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Our project focuses on developing a real-time movie recommendation system based on users' emotions. By analyzing facial expressions while they watch movie trailers, the system recommends films matching their emotional state. The integration of facial emotion recognition and a chatbot using the LLM and a hugging model of generative-AI for getting emotions from text aims to enhance personalization and improve the user experience. The project combines machine learning, generative-AI models, and hybrid recommendation algorithms to provide tailored suggestions from IMDb's movie database, helping both movie enthusiasts and creators to engage with content that suits the viewer's mood.

1768. AUTOMATED NEURO IMAGING DIAGNOSTIC A MACHINE LEARNING MODEL FOR ALZHEIMER AND BRAIN TUMOR DETECTION

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Alzheimer's Disease and brain tumors are severe neurological conditions requiring early detection to improve treatment outcomes. Current diagnostic methods rely on manual interpretation of MRI scans, which is time-consuming, expensive, and prone to human error. This project aims to develop an AI-powered diagnostic system using machine learning and minimal deep learning techniques. The system will automate the analysis of MRI data to classify these conditions efficiently and accurately. By optimizing computational efficiency and ensuring clinical relevance, the tool will enhance medical decision-making and reduce diagnostic time.

1769. SKILL-BAZAAR: EMPOWERING FREELANCERS IN PAKISTAN

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Skill-Bazaar is an innovative freelancing network designed to connect freelancers with clients, particularly in underrepresented sectors such as mechanical engineering, civil engineering, and photography, in addition to traditional IT services. Skill-Bazaar uniquely tackles the difficulties encountered by freelancers, such as financial uncertainty caused by recurrent bid rejections, restricted visibility for beginner freelancers, and insufficient tools for efficient communication. The platform presents novel features including a credit refund mechanism for financial stability, AI-driven job recommendations to improve exposure and relevance, and real-time video and text communication tools to enable smooth client-freelancer interactions. Moreover, secure payment gateways foster

confidence and safety in transactions. The primary aim of Skill-Bazaar is to establish a flourishing freelancing ecosystem that promotes growth, inclusivity, and enduring success for freelancers globally.

1770. AI-DRIVEN LANGUAGE CONVERSION PLATFORM

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

The AI-Driven Programming Language Conversion Platform is an innovative solution designed to address the growing challenges of translating code across programming languages in an increasingly diverse and interconnected development ecosystem. Traditional methods of code translation often involve manual effort, extensive debugging, and a deep understanding of both source and target languages, making the process time-intensive and prone to errors. This platform leverages cutting-edge artificial intelligence technologies, including advanced machine learning algorithms and natural language processing (NLP) techniques, to automate code translation while maintaining high levels of accuracy and efficiency. [2] The platform is meticulously engineered to account for the syntactic structures and semantic intricacies of different programming languages, ensuring that functionality and logic are preserved during translation. Unlike conventional approaches, this AI-powered tool goes beyond simple syntax mapping by incorporating contextual analysis to adapt to language-specific paradigms and patterns. [4] The system also offers scalability and adaptability, allowing it to handle evolving programming languages and frameworks, making it a future-proof solution for developers. [2] The project integrates state-of-the-art AI methodologies with robust software development practices to create a platform that not only accelerates the translation process but also enhances the quality and reliability of the resulting code. By reducing human intervention, developers can focus on higher-order tasks such as optimization and innovation, while the platform efficiently handles the complexities of code migration. [1] The expected outcomes of this project include significant time savings, improved productivity, and reduced costs in cross-language development. Moreover, it empowers teams to work seamlessly across multiple platforms, facilitating collaboration in multilingual environments. This AI-driven solution has the potential to revolutionize the way developers approach code migration, offering a transformative tool that bridges the gap between programming languages, simplifies integration, and drives innovation in software development practices. [4]

1771. OPTI VIEW

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

OptiView – The Visionary Eye is a revolutionary project aimed at enhancing the independence and quality of life for visually impaired individuals through innovative wearable technology. The primary objective of this project is to develop smart glasses equipped with advanced features such as text recognition, obstacle detection, and voice and gesture-based controls. This wearable technology leverages machine learning, computer vision, and human-computer interaction to provide real-time navigational aids and environmental interaction, thus mitigating the daily challenges faced by the visually impaired.

The significance of OptiView lies in its ability to transform how visually impaired people interact with their surroundings, making mobility safer and interactions more intuitive. By incorporating real-time data processing and interactive features, these smart glasses will enable users to navigate both familiar and unfamiliar environments with greater ease and confidence.

The expected outcomes of the project include improved mobility, enhanced access to information, and better social integration for its users. The technology aims to deliver a seamless user experience

through a user-friendly interface that accommodates the unique needs of visually impaired individuals. OptiView is not just a tool for aiding sight; it is a step towards creating a more inclusive society where technology removes barriers and opens up new possibilities for all.

1772. LEAFDETECT PROCARE

Project Advisor	MS. SEHAR ALI
Status	In Process of Completion

LeafDetect ProCare is an advanced AI-driven application designed to assist gardeners, farmers, and plant enthusiasts in detecting and managing plant diseases effectively. By leveraging machine learning techniques, particularly convolutional neural networks (CNNs), the system enables users to diagnose plant health issues by simply uploading images of affected leaves via a mobile app. The application not only identifies common plant diseases but also provides personalized care recommendations to ensure effective treatment and prevention.

The primary motivation for this project is the widespread challenge of early plant disease detection, which often goes unnoticed by non-experts due to lack of knowledge or access to agricultural specialists. Diseases such as powdery mildew, blight, and leaf spots can spread rapidly, significantly affecting the productivity of crops and kitchen gardens. LeafDetect ProCare bridges this gap by democratizing plant health management, offering users an easy-to-use tool for timely diagnosis and intervention.

Key features of the application include real-time disease detection, personalized care suggestions, expert consultation services, plant health history tracking, and multi-language support to cater to a diverse user base. The system operates seamlessly on mobile platforms, ensuring accessibility for users in remote or resource-constrained settings. Moreover, its offline functionality allows users to access previously saved care recommendations without an internet connection.

The project combines expertise in artificial intelligence, image processing, and mobile application development to deliver a robust, scalable, and user-friendly solution. By empowering users with actionable insights into plant health, LeafDetect ProCare aims to reduce crop losses, promote sustainable agricultural practices, and encourage kitchen gardening. This innovative approach represents a step forward in leveraging AI for agriculture and home gardening, contributing to food security and environmental sustainability.

F24-BSSE

1773. SCRAPCARS

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

The SCRAPCARS Website is a dynamic platform that revolutionizes the process of buying and selling scrap vehicles and parts. It addresses the challenges faced by individual sellers and businesses in disposing of old, damaged, or non-functional cars and provides buyers with easy access to affordable spare parts and recyclable materials. The platform leverages an intuitive user interface and advanced search features to simplify listing, browsing, and secure transactions. Detailed product descriptions, including condition, compatibility, and pricing, ensure transparency and informed decision-making. The platform incorporates eco-friendly practices by promoting the recycling of automotive waste and proper disposal methods, contributing to environmental sustainability. Features like real-time bidding, verified sellers, and buyer protection enhance user trust and market efficiency. This project integrates knowledge from e-commerce systems, database management, and environmental sustainability to

create a user-centric solution. The anticipated outcome is a streamlined, reliable marketplace that reduces waste, promotes recycling, and supports sustainable automotive practices, making it a significant contribution to the circular economy.

1774. SPORTSWEARXPRESS-AI-ENHANCED SPORTSWEAR CUSTOMIZATION PLATFORM

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

This project, SportswearXpress, focuses on developing an AI-driven e-commerce platform designed to transform the sportswear customization experience by addressing critical industry challenges. Precise design tools and high customer satisfaction are paramount in this space, yet existing platforms often lack advanced design features, dynamic pricing, and real-time communication, resulting in miscommunication and unmet customer expectations. To address these issues, SportswearXpress integrates AI-powered design tools that guide users through the customization process step-by-step. An intelligent chatbot recommends appropriate tools and actions tailored to each task, ensuring efficient and accurate completion of personalized designs. After finalizing the design, the platform dynamically adjusts pricing based on design complexity and the number of tools used, offering transparency and fair pricing. Key knowledge areas include artificial intelligence for personalized design suggestions, real-time communication systems to streamline user-seller interactions, and dynamic pricing algorithms that align cost with customization complexity. Leveraging technologies like TensorFlow.js for AI, OpenCV for image processing, and Socket.io for instant communication, this platform will enhance user satisfaction, minimize design errors, and optimize the customization workflow. The result is a user-friendly, engaging platform that advances both customer satisfaction and operational efficiency in the sportswear industry.

1775. ULMS (UNIFIED LOGISTICS MANAGEMENT SYSTEM) FOR B2B, B2C, AND C2C

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

The Unified Logistics Management System (ULMS) is created to tackle the common issues faced by courier services, especially for small and medium-sized businesses in Pakistan. The platform offers a complete door-to-door service for B2B, B2C, and C2C deliveries, with key features like real-time tracking, easy rider booking, and direct communication between users and riders. By using technologies such as React.js, Node.js, Firebase, MongoDB, and Tailwind CSS, ULMS aims to make logistics operations smoother, speed up deliveries, and improve customer satisfaction. This project combines knowledge from software development, logistics management, and user experience design to create a system that simplifies order processing and reduces delays. The goal is to build a flexible and scalable solution that not only increases efficiency but also helps businesses cut costs and operate more smoothly.

1776. ETHEREAL BLADE: DIMENSIONAL WARRIOR QUEST

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

Ethereal Blade is a 2D action-adventure game that introduces an innovative dimension-cutting mechanic, setting it apart from traditional titles in the genre. The project addresses the lack of innovation in mechanics and storytelling in similar games by offering a rich narrative and engaging gameplay. The core challenge involves stopping Dreadmoor, a dark sorcerer attempting to merge all dimensions into a chaotic realm. Players assume the role of Kaida, a young warrior wielding the mystical Ethereal Blade, journeying through multiple dimensions with unique challenges, allies, and abilities.

The game integrates key knowledge areas such as game development, software engineering, graphic design, and algorithm optimization. It employs cutting-edge 2D graphics and a seamless blend of narrative-driven gameplay, puzzles, and boss battles. The result is an immersive experience designed to redefine standards in 2D gaming and deliver an innovative product to the gaming community.

1777. LET'S GROW

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

"Let's Grow" addresses the barriers faced by underprivileged entrepreneurs in accessing financial resources and manpower support. The project bridges these gaps through a web-based platform leveraging AI and modern software technologies. By facilitating connections between investors and startups, and offering manpower support via charitable partnerships, the platform empowers sustainable entrepreneurship. The project utilizes ReactJS, NodeJS, MongoDB, and AI tools to achieve transparency, streamline investor-startup interactions, and ensure a robust verification system. The end goal is to reduce poverty, foster innovation, and enable socio-economic uplift through accessible entrepreneurial support.

1778. TUTOR-CONNECT

Project Advisor	DR. M. ADNAN AZIZ
Status	In Process of Completion

The project aims to develop a **Tutor Connect System**, which addresses the growing need for accessible, efficient, and user-friendly platforms that connect tutors and students. This platform resolves the issue of finding qualified tutors in a structured and reliable way, particularly for remote learners. Utilizing knowledge areas such as database management, user interface design, and web development, the system will ensure smooth functionality, secure data handling, and an intuitive interface. The results will include a responsive web-based application with seamless tutor-student matching, appointment scheduling, and payment integration.

1779. SEEK-IO

Project Advisor	DR. M. ADNAN AZIZ
Status	In Process of Completion

Seek.io is an innovative online education platform designed to address critical challenges in Pakistan's virtual learning landscape. By focusing on providing credible certifications, effective cheating prevention, and affordable, bilingual courses in Urdu and English, Seek.io aims to make quality education accessible to everyone.

The platform incorporates advanced cheating detection using Python-based models and ensures secure payment processing with Stripe. Built with a Laravel backend and PostgreSQL database, it offers a reliable and scale-able infrastructure.

Seek.io prioritizes mastery-level learning in STEM fields, promoting deep knowledge and skill building. It aspires to revolutionize online education by creating an inclusive, secure, and high-quality learning environment tailored to local needs.

1780. SMART INVENTORY MANAGEMENT SYSTEM

Project Advisor	DR. M. ADNAN AZIZ
Status	In Process of Completion

The *Smart Inventory Management System* is a cutting-edge solution designed to revolutionize inventory management for the apparel industry. Leveraging advanced machine learning techniques, the system predicts demand for items such as t-shirts, jeans, and dress pants by analyzing historical sales data and market trends. This ensures optimal stock levels, minimizing the risks of overstock and stock-outs while improving operational efficiency.

The project goes beyond traditional inventory systems by offering real-time updates, seamless integration with existing IT infrastructures, and scalability to meet the growing needs of businesses. The web-based platform, built using NextJs and NodeJS, is hosted on AWS for maximum performance, reliability, and accessibility. By empowering small and medium-sized apparel retailers to make data-driven decisions, the system addresses critical challenges in an industry marked by rapidly changing consumer preferences and seasonal trends.

Ultimately, this innovative platform aims to redefine inventory management practices, making them smarter, more agile, and economically sustainable, while providing the project team invaluable experience in cutting-edge technologies and real-world problem-solving.

1781. LEARNLAB: A LEARNING PLATFORM FOR JOB-EADY SKILLS

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

LearnLab is a transformative, web-based learning platform that aims to bridge the gap between academic knowledge and practical, industry-ready skills. It is designed to meet the demands of modern learners by integrating advanced personalization, hands-on project-based modules, mentorship from industry experts, and career-focused services.

The platform's key focus is on personalization: learners begin their journey with an onboarding questionnaire that evaluates their existing skills, career aspirations, and learning preferences. Based on this data, LearnLab uses a dynamic recommendation engine to suggest tailored courses and capstone projects that align with individual goals. Each recommended course includes a blend of theoretical lessons, interactive quizzes, and real-world projects designed to simulate industry challenges.

LearnLab also emphasizes career readiness through its capstone project framework. Learners work on industry-aligned challenges, gaining practical experience that not only enhances their skills but also builds a portfolio of completed projects. Industry analysts and instructors provide detailed feedback, helping learners refine their solutions and ensuring their work meets professional standards.

LearnLab offers mentorship and career services to support learners in their career transitions. Features such as 1:1 mentoring session, resume reviews, mock interviews, and job referrals equip learners with the tools and confidence to succeed in the job market. The platform's mentorship program connects learners with industry professionals who provide guidance on project improvements, skill development, and career planning.

Built on the robust MERN stack (MongoDB, Express.js, React.js, and Node.js), LearnLab is a scalable, secure, and user-friendly platform that serves multiple user roles: learners, instructors,

admins, and industry analysts. Its modular architecture ensures seamless integration of new features and smooth performance, even as the user base grows.

By combining cutting-edge technology with real-world relevance, LearnLab strives to create a comprehensive, end-to-end learning ecosystem that empowers users to achieve their professional goals. It is not just a learning platform but a career enabler, preparing individuals to meet the challenges of the modern workforce with confidence and expertise.

1782. COMPLETE FYP PROCESS AUTOMATION WITH AI CHATBOT AND MEETING SCHEDULER

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

This Project aims to streamline communication and collaboration, enhance transparency and accountability, and provide effective documentation and archiving. The project also focuses on data-driven decision-making and analysis. In conclusion, the document suggests that automating the Final Year Project (FYP) process with an AI chatbot and management tools significantly enhances efficiency and the student-faculty experience, setting a new standard for academic project management.

1783. GUIDERA: GUIDING YOUR ACADEMIC JOURNEY

Project Advisor	DR. NAVEED HUSSAIN
Status	In Process of Completion

Guidera is an innovative platform designed to streamline the university selection and application process for students in Pakistan. The platform addresses the critical challenges faced by students, such as identifying suitable universities, managing complex application procedures, and preparing for entry tests, by leveraging cutting-edge technology. By integrating personalized recommendations, comprehensive university databases, and process automation, Guidera simplifies decision-making and ensures students stay updated with deadlines.

Key functionalities include AI-driven university recommendations based on academic scores and personal preferences, automated application management, and progress tracking. The platform also offers mock entry tests for preparation, result analysis using data science techniques, and a chatbot for academic and career guidance. The results aim to deliver a seamless, efficient, and stress-free experience for students navigating their academic journey. With a robust combination of AI, machine learning, and data science, Guidera is poised to revolutionize the university application process and empower students to make informed decisions.

1784. IGNITE FUELS

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

This project Ignite fuel delivery app provides a convenient solution for refueling vehicles by allowing users to order gasoline or diesel directly to their location, saving time for busy individuals. It features real-time pricing, flexible payment options, and delivery tracking, enhancing user experience. Additionally, the app is expanding to include automotive services like car washes and tire changes, benefiting both consumers and fuel providers by streamlining operations and increasing market reach. Vehicle owners have had to physically drive to a gas station, wait in line, and refuel their vehicles. This can be time-consuming, especially for those with busy schedules or who live in remote areas with

limited access to fuel stations. Additionally, companies that operate vehicle fleets, such as taxi services, delivery companies, and construction firms, often face challenges in tracking fuel consumption and ensuring their vehicles are refueled in a timely manner. An online fuel delivery app solves these problems by allowing customers to order fuel & other facilities directly to their vehicle's location. This saves them the time and effort of going to a gas station.

1785. AI BASED PROPERTY RENT AND EVALUATION SYSTEM

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

This project involves developing a mobile application for managing property rentals. The application will allow admins, owners, and tenants to manage buildings, floors, and rooms effectively. It includes features for rent collection, tenant management, expense tracking, and reporting, all integrated with Firebase for real-time database management and user authentication.

The Property Rent System Management Mobile Application is designed to revolutionize how property owners manage their rental properties. This Android-based app integrates AI-powered features to address the inefficiencies in traditional property management, such as inaccurate rent pricing, lack of tenant personalization, and ineffective business decision-making.

The application will offer functionalities for tenant management, rent collection, and expense tracking. In addition, it will provide intelligent rent recommendations based on market trends, property conditions, and tenant profiles, helping owners optimize their income. A chatbot will also be included to assist users with inquiries and guide them through the app's features, enhancing user experience.

By leveraging Firebase for real-time data synchronization and Android Studio for development, the application will ensure seamless management of properties. Property owners will benefit from real-time insights, automated notifications, and comprehensive reporting, enabling them to make informed business decisions, reduce vacancies, and improve tenant satisfaction.

1786. PAKAM

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

PakAM tackles the inefficiencies of traditional affiliate marketing by automating link processing and targeted promotion across multiple platforms. This project develops a multi-platform solution (iOS, Android, web, desktop) that streamlines link generation, shortening, modification, and automated sharing via Telegram bots and WhatsApp, leveraging NLP to enhance targeting and effectiveness. Using Flutter for the frontend, Dart for the backend, and integrating with social media APIs, PakAM aims to empower affiliates with a user-friendly platform to manage campaigns and maximize reach across diverse channels.

1787. ADVANCED AI-DRIVEN ARCHITECTURAL DESIGN SYSTEM FOR DYNAMIC FLOOR PLAN GENERATION

Project Advisor	MR. ADEEL ARIF
Status	In Process of Completion

The Advanced AI-Driven Architectural Design System addresses the inefficiencies and complexities in traditional floor plan design by leveraging cutting-edge AI technologies such as Conditional Generative Adversarial Networks (CGANs) and Convolutional Neural Networks (CNNs). This system empowers architects, developers, and non-professional users to generate customizable, professional-

grade residential floor plans in real time. By integrating AI-driven models with user-centric design inputs, the system significantly reduces design time, optimizes spatial planning, and enhances accessibility to advanced architectural tools.

The project combines knowledge from key domains, including machine learning, architectural design, and software engineering, to create an intelligent platform that validates user inputs, generates compliant designs, and exports plans in formats compatible with industry-standard tools like AutoCAD. The expected results include a scalable, modular platform capable of producing high-quality designs while maintaining flexibility for future enhancements, such as multi-floor and mixed-use layouts. This innovative solution aims to democratize architectural design and establish a new standard for efficiency and precision in the industry.

1788. INTELLITRAIN: A WEB-BASED PLATFORM FOR CUSTOM MACHINE LEARNING MODEL CREATION

Project Advisor	MR. ADEEL ARIF
Status	In Process of Completion

Machine Learning (ML) is a complex field that often requires expertise in multiple disciplines, posing a significant barrier to entry for many individuals. This complexity arises from the need to understand and apply intricate mathematical models, statistical algorithms, data handling, and programming, all while integrating domain-specific knowledge. As a result, beginners find it challenging to utilize ML frameworks and libraries effectively to address real-world problems. To overcome this hurdle, we propose a web-based platform that simplifies the process of training ML models. This platform aims to empower non-technical users by providing an accessible tool for developing ML solutions without needing deep expertise in the underlying algorithms and techniques. Through this approach, we hope to democratize the use of ML, making it more approachable for a broader audience.

1789. SMART BARBIE: YOUR CHILD'S AI LEARNING BUDDY

Project Advisor	MR. ADEEL ARIF
Status	In Process of Completion

The Smart Barbie project aims to create an AI-powered interactive learning companion for children. It focuses on enhancing educational support, providing emotional comfort through voice-based interactions, and ensuring child safety by detecting dangerous objects and unknown faces. The system will alert parents via email, allowing them to monitor their child's activities and safety. This web-based application leverages Natural Language Processing (NLP), computer vision, and machine learning techniques to offer a comprehensive and user-friendly experience.

1790. EDUSUGGEST: A CHROME APPLICATION FOR TAILORED EDUCATIONAL LEARNING

Project Advisor	MR. ADEEL ARIF
Status	In Process of Completion

EduSuggest is a Chromium extension with an aim to improve the online learning experience. It employs **Error! Reference source not found.** and **Error! Reference source not found.** to recommend personalized educational content. Machine learning will handle all the recommendations in the form of a recommendation engine, and Natural language processing will manage the **Error! Reference source not found.**, and data scraping for the dataset. The dataset shall be made by converting the textual data into vector embeddings using graph-based algorithm *Hierarchical*

Navigable Small World (HNSW) and Artificial Neural Network (ANN) model. The engine also uses Cosine Similarity to perform semantic search on the highlighted text.

The system grows smarter as users interact more by highlighting content and requesting suggestions, thereby creating a refined recommendation engine. The processing is done on the user's device and only database request is made over the internet, which ensures privacy, but the user is also allowed to store data online. **Error! Reference source not found.** access to highlighted content is provided, and the user has the choice to delete any past highlights.

1791. WORKSPHERE

Project Advisor	MR. ADEEL ARIF
Status	In Process of Completion

WorkSphere is an AI-powered platform designed for professional networking, integrating advanced Natural Language Processing (NLP) techniques for content moderation and text summarization. It addresses gaps in maintaining professional conduct and consolidates career development tools like job searching, professional networking, and knowledge sharing into one platform. Users can enjoy features such as foul language detection in posts and documents, text summarization, weekly quizzes, and personalized job recommendations. The end product aims to deliver a secure, professional, and user-friendly environment that supports career growth and engagement.

By using advanced Natural Language Processing (NLP) techniques, the platform ensures a respectful and professional environment by detecting inappropriate language in user-generated content across posts, PDF files, and Word documents. The platform also integrates features for summarizing lengthy content, enabling users to easily understand and search for relevant information. The end product will deliver a secure, scalable, and user-centric solution aimed at professionals, recruiters, and career enthusiasts alike.

1792. FIX FUSION

Project Advisor	MR. AHSAN AZHAR
Status	In Process of Completion

FixFusion is an innovative mobile application designed to address a common issue in Pakistan: the lack of control in an uncontrolled industry of mobile repair experts that are not trustworthy and not knowledgeable. With cellphones being used so widely, the need for repair services has grown, but many clients have trouble finding trustworthy experts. FixFusion meets this need by creating a user-friendly platform where consumers can quickly connect with experts who are qualified to take care of their repair needs. By providing a user-friendly interface, the app encourages competition and transparency in an otherwise opaque business, allowing users to submit issues and receive bids from qualified professionals.

One of its biggest advantages is FixFusion's integration of machine learning algorithms that look at technician profiles, user evaluations and customer needs to suggest the best experts. It maintains high service standards that guarantee the users have a customized and practical experience. This software prefers in person handovers to minimize security risks and decrease the possibility of loss of devices or third-party repairs. The encrypted in app chat function also allows customers and technicians to chat about repair details and build trust without sharing critical personal information.

FixFusion will be developed with scalable and reliable technologies. React Native will be used to develop cross platform mobile, and Django or Node.js for backend frameworks to ensure speed and reliability. The application uses PostgreSQL or MongoDB databases to efficiently handle enormous volumes of user and transaction data. FixFusion aims to transform mobile repair services in Pakistan by fusing creativity, technology and a customer centric mindset. It not only makes for a streamlined

repair process, but it also sets up transparency and trust for the industry, which has long been one that has been plagued by uncertainty.

1793. VECTORBITE

Project Advisor	MR. AHSAN AZHAR
Status	In Process of Completion

VectorBite is a cutting-edge online platform that transforms the way users create and customize templates with vector logos. By offering a unique combination of features, VectorBite addresses the limitations of traditional graphic design tools, providing a seamless and efficient template design experience.

The platform's innovative approach solves the problem of cumbersome template creation and customization, allowing users to create templates from scratch or upload existing ones, and easily insert and customize vector logos using a drag-and-drop feature. VectorBite's AI integration further enhances the user experience, enabling AI-powered template creation for added convenience.

With a focus on user-friendliness, collaboration, and efficiency, VectorBite's key features include a wide range of template sizes, vector logo integration, sharing and collaboration tools, and AI-powered template creation. By leveraging AI and machine learning algorithms, VectorBite creates a user-centric platform that streamlines the template design process, making it an ideal solution for individuals and businesses seeking to create professional-grade templates with ease.

Key knowledge areas applied in the development of VectorBite include artificial intelligence, machine learning, web development, user experience design, and data analytics. The expected result is a versatile, collaborative platform that meets the needs of users, offering a hassle-free template design experience and improving the overall efficiency of the design process.

1794. RED-RELIEF

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

The "Red-Relief" project aims to create a hybrid mobile and web application that connects blood donors with recipients efficiently. By combining the flexibility of mobile platforms and the accessibility of web interfaces, the system offers a seamless user experience across devices. The app addresses the critical challenge of locating compatible blood donors in emergencies through features such as geolocation-based matching, real-time notifications, and filtering by blood type, availability, and donor preferences. Additionally, it includes advanced functionalities like health record integration, offline synchronization, and analytics dashboards for administrators and hospitals. The hybrid approach ensures scalability, accessibility, and enhanced usability, making lifesaving resources available anytime, anywhere.

1795. FITBLOOM

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

Fitbloom is an innovative fitness and wellness platform crafted to provide users with a seamless, engaging, and motivational journey toward achieving their health and fitness goals. Unlike traditional solutions, Fitbloom emphasizes a progressive user flow, designed to make fitness activities more structured, intuitive, and rewarding. The platform offers features tailored for gym enthusiasts, including built-in timers and an extensive library of video guides to assist

users in performing exercises with proper technique and pacing. This approach ensures that users receive clear and actionable guidance, allowing them to maximize the effectiveness of their workouts. In addition to its fitness-focused features, Fitbloom provides a dedicated section for finding and connecting with healthcare professionals. The doctor listing feature showcases essential details such as the doctor's name, address, and contact information, making it easier for users to access medical advice and support when needed. This integration bridges the gap between fitness and health management, offering a more holistic approach to overall wellness. To further enhance user engagement, Fitbloom incorporates gamification elements that introduce an exciting layer of motivation and achievement. Users can earn badges and improve their rankings within the platform, fostering a sense of accomplishment and encouraging friendly competition among members. This gamified system not only boosts participation but also builds a vibrant and supportive community where users can celebrate milestones and inspire one another. With its combination of user-focused design, practical features, and motivational tools, Fitbloom aims to redefine the way people approach fitness and wellness. By creating an accessible and engaging experience, the platform empowers users to take charge of their physical health and mental well-being while enjoying a sense of progress, connection, and accomplishment along the way.

1796. PETWELL JUNCTION

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

PetWell Junction is an innovative platform designed to address common challenges faced by pet owners, shelters, and veterinarians. One of the primary problems it aims to solve is the difficulty of finding trusted veterinarians, especially in emergencies, where quick access to telemedicine and physical consultations is critical. Additionally, the platform resolves the issue of lost pets by utilizing AI-powered image matching to reunite them with their owners efficiently. Another key feature is the community engagement section, where pet owners and animal lovers can exchange advice, share resources, and support each other.

To enhance the user experience, PetWell Junction incorporates a vet directory with detailed search options, allowing pet owners to find veterinarians based on location, gender preferences, and services (such as telemedicine or physical appointments). The platform also supports meal plans and precautionary care guidelines for different breeds.

This project integrates AI, image processing, and web development knowledge to create a comprehensive solution. The expected outcome is a fully functional platform that improves pet welfare, strengthens community ties, and simplifies access to veterinary care. By addressing these significant pain points, PetWell Junction will positively impact animal care and owner satisfaction.

1797. MEDIQ: AI-DRIVEN HOSPITAL MANAGEMENT SYSTEM

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

MedIQ is a cutting-edge hospital management system designed to transform healthcare delivery in Pakistan. The platform combines traditional hospital management functionalities with advanced AI technologies. It ensures secure management of patient records, simplifies appointment scheduling, and leverages AI-powered diagnostic tools to enhance patient outcomes. By analyzing symptoms, MedIQ's AI modules predict diseases and recommend appropriate specialists, reducing diagnostic errors and minimizing delays.

Furthermore, MedIQ features an AI-based disease surveillance system that tracks real-time outbreaks, enabling public health officials to respond swiftly to emerging health crises. Its unique referral system

bridges rural clinics with urban hospitals, facilitating timely patient transfers and equitable access to specialized care. The platform also streamlines billing, optimizes hospital inventory management, produces insightful data-driven reports, and supports telemedicine for remote consultations. MediQ is positioned to redefine efficiency and accessibility in healthcare throughout the region.

1798. TOURISTAAN

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

1799. FASHIONFUSION

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

FashionFusion is an innovative AI-driven mobile application that transforms the way users engage with fashion. Designed to address common challenges such as finding clothing that suits individual preferences and maximizing wardrobe utilization, the app seamlessly combines fashion management with shopping. By integrating AI-powered outfit recommendations, advance image recognition, and connecting to online retailers. FashionFusion enables users to utilize their wardrobe, receive tailored style suggestions, and shop for similar items effortlessly. It offers a secure, engaging experience that bridges the gap between styling and commerce, empowering users to confidently optimize their fashion choices.

1800. ECLINICAL

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

The eClinical project aims to revolutionize healthcare accessibility by developing a mobile application that facilitates home-based laboratory testing, real-time health analytics, and personalized healthcare recommendations. Utilizing AI-driven analysis and secure data integration, the app addresses the inefficiencies of traditional healthcare systems, enabling users to monitor their health from the comfort of their homes. The inclusion of features like a doctor recommendation system and telemedicine integration ensures a comprehensive user experience, emphasizing preventive care and proactive health management.

1801. AI-AUGMENTED COLLABORATIVE GLOBAL PRODUCT INSIGHT & TRACKER

Project Advisor	MR. IMRAN ASHRAF
Status	In Process of Completion

PriceGlobally aims to revolutionize the way consumers make purchasing decisions within local e-commerce marketplaces. The platform addresses the challenges buyers face when navigating through various online stores, including tracking fluctuating prices, comparing product features, and understanding market trends. By providing an integrated solution with price tracking, wishlist functionality, and real-time product availability alerts, the platform enables users to make well-informed decisions.

Additionally, **PriceGlobally** employs AI-driven predictive insights to analyze local price trends, helping users identify the best time to purchase a product. The platform's user-friendly features such as voice search, chatbot support, and social media integration enhance the shopping experience by offering easy navigation, personalized recommendations, and a streamlined comparison process.

Drawing on knowledge areas like **machine learning, web scraping, and user experience design**, the project aims to deliver a seamless experience to local shoppers. The expected outcome is a platform that not only empowers consumers with insightful data but also fosters more efficient and transparent shopping experiences across local marketplaces, with future potential for global expansion.

1802. ZARRAAT: REVOLUTIONIZING AGRICULTURE FOR PAKISTANI FARMERS

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

"Zarraat" is a mobile app designed to address the challenges faced by Pakistani farmers by providing a centralized digital solution for their agricultural needs. Farmers often struggle with outdated practices, limited access to real-time information, and inefficient market connectivity. The app provides real-time weather forecasts, crop recommendations, market price updates, a crop buying/selling platform, and accessibility features like TalkBack for visually impaired users. With multilingual support (English/Urdu), it ensures inclusivity for diverse user groups. Developed using Flutter for cross-platform development and *Firebase* for backend services, "Zarraat" integrates *APIs* for weather data, market prices, and chatbot services. Zarraat is a platform for easy crops dealing. This document outlines the scope, objectives, challenges, and features to guide the project's development.

1803. PROPERTY MATCH

Project Advisor	MR. M. FAHAD KHAN
Status	In Process of Completion

The rental property market faces numerous challenges, including the dominance of commission-based agents, lack of transparency in property listings, and difficulties in finding suitable rental options within a limited timeframe. PropertyMatch addresses these issues by offering a comprehensive, user-friendly platform that connects property owners directly with clients, eliminating the need for intermediaries and their associated commissions. This project ensures transparency and trust by requiring property owners to upload legal documents for property verification, thereby mitigating the risks of unauthorized or fraudulent listings.

The platform is designed to cater to a diverse audience, including students, families, and international visitors, providing tailored options based on their specific needs. By introducing categorized listings such as "Rental for Students" and "Rental for Overseas Visitors," PropertyMatch ensures a seamless and personalized property search experience. Advanced features like chatbots are integrated to facilitate user interaction, allowing clients to specify their preferences and receive property recommendations that align with their criteria, saving time and effort.

The project leverages key knowledge areas such as customer-centric design, structured data representation, and efficient workflow management to create an effective rental ecosystem. PropertyMatch not only addresses the immediate needs of property seekers but also provides property owners and investors with valuable insights into market trends, enabling informed decision-making.

The expected results include a transformative impact on the rental property market by eliminating the dependency on agents, reducing costs, and increasing the reliability of property transactions. By prioritizing user convenience, transparency, and trust, PropertyMatch has the potential to revolutionize the rental industry, setting a new benchmark for efficiency and authenticity in property management.

1804. CROP CARE

Project Advisor	MR. M. FAHAD KHAN
Status	In Process of Completion

Crop Care aims to assist farmers by providing a mobile application for detecting crop diseases and deficiencies through images and offering actionable treatment recommendations. The app integrates features like a marketplace for pesticide and fertilizer purchases and a review system for user feedback. By expanding usability to support multiple crop types, Crop Care bridges gaps in current agricultural solutions and ensures an easy-to-use, cost-effective platform.

1805. TRENDIFYPK

Project Advisor	MR. M. FAHAD KHAN
Status	In Process of Completion

TrendifyPK is an e-commerce platform developed with Artificial Intelligence that aims to give Pakistan consumers convenient access to trending products and services. Using AI, the platform suggests products depending on the customer's preferences as well as current trends in the market, thus, simplifying finding the most popular products. Also, TrendifyPK helps local wholesalers by providing them tools to create their own stores import required products, and sell them under their private label, which creates branding opportunities for them. What sets TrendifyPK apart from its competition is the integration of Alibaba's API service for drop-shipping allowing users to bring in international products while local wholesalers get to source internationally not needing direct importation. Which when incorporated with a clean and easy-to-navigate homepage.

1806. STAYKARO (WITH LESS PAY KARO)

Project Advisor	MR. M. FAHAD KHAN
Status	In Process of Completion

Stay-Karo is a mobile app designed to simplify finding student accommodation and meal services. It tackles the issues of high broker fees, unreliable information, and lack of affordable homemade food by connecting students directly with property owners and food providers. Key features include secure payment gateways and automatic roommate data sharing with local police to enhance security.

The project leverages UI/UX design, database management, mobile app development, and cybersecurity to create a smooth, secure user experience. Expected outcomes are improved convenience, cost savings, and enhanced security for students.

1807. EVOLVIUM

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

Evolvium is a decentralized freelance teaching platform designed to revolutionize the online education landscape. The project addresses critical issues in traditional online education systems, such as restricted educator autonomy, limited interactivity, and low student engagement. By empowering educators to independently create, manage, and price their courses, Evolvium fosters innovation and flexibility in teaching. Students benefit from AI-driven personalized learning paths, peer-to-peer tutoring, and interactive live sessions, ensuring a tailored and engaging learning experience.

The significance of this project lies in its ability to bridge the gaps between conventional online learning platforms and modern technological advancements. Evolvium integrates advanced AI-powered skill gap analysis, lockdown-mode exams for cheat-free assessments, and automated credential validation systems to ensure quality and integrity. Real-time communication tools and a secure payment system enhance the platform's usability, making it an all-encompassing solution for educators and learners.

Key knowledge areas utilized in this project include full-stack web development, artificial intelligence, cybersecurity, human-computer interaction, and real-time communication technologies. The platform leverages ReactJS, NodeJS, TensorFlow, WebRTC, and payment gateway integrations to deliver a robust, scalable, and secure solution.

The expected outcome is a fully functional, scalable, and globally accessible platform that redefines the standards for online education. By providing educators with autonomy and students with a personalized, interactive, and secure learning environment, Evolvium sets a new benchmark for innovation and engagement in the e-learning industry.

1808. NOTEMASTER: THE ULTIMATE PRODUCTIVITY PLATFORM FOR STUDENTS

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

The NoteMaster AI project is a cross-platform (web and mobile) app designed to revolutionize student productivity by integrating advanced artificial intelligence (AI) into the study process. NoteMaster AI simplifies the organization, comprehension, and engagement with study materials using cutting-edge AI technologies like Large Language Models (LLM) and Retrieval-Augmented Generation (RAG). It offers features like intelligent study material analysis, personalized study guides, natural language query responses, real-time tutoring, custom quiz generation, task reminders and management, exporting generated content in PDF form, and a coding assistant tailored for IT students. The expected outcomes include improved academic performance, better time management, and enhanced comprehension of complex topics.

1809. FIND MY BUS

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

In bustling cities like Lahore, commuters often struggle with the unpredictability of public transport, leading to frustrations such as missed appointments and long waits at bus stops. This project addresses these challenges through "Find My Bus," an innovative Android app designed to transform the experience of tracking Speedo buses in Lahore.

"Find My Bus" leverages advanced real-time tracking technology, enabling users to monitor the exact locations of Speedo buses via a dynamic map interface. With detailed route information, including start and end points, major stops, and potential deviations, commuters can effectively plan their journeys. The app also features an intuitive schedule tool for easy access to departure and arrival times, along with ETA calculations that keep users informed about expected bus arrivals.

This solution significantly benefits both passengers and the Speedo company by enhancing customer satisfaction and improving the company's market image. Users receive timely updates on delays and route changes through push notifications, while emergency contact information and offline access ensure they have critical details at their fingertips.

Ultimately, "Find My Bus" serves as a game-changer for Lahore's commuters, bridging the gap between the uncertainty of private transport and the reliability of public transit, thereby streamlining their daily travel experiences.

1810. THE STREAMLINING DAIRY OPERATIONS

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

The Streamlining Dairy Operations project aims to address critical inefficiencies and challenges faced by dairy farms in managing diverse operations, including accounting, milk sales tracking, feeding schedules, and medicine management. Traditional manual methods often result in fragmented processes, operational delays, and increased costs, limiting profitability and sustainability. This project proposes a comprehensive management solution tailored specifically for dairy farm operations. By integrating advanced tools for real-time analytics, resource allocation, and sales monitoring, the system centralizes data, enabling informed decision-making and operational efficiency. Utilizing knowledge areas such as web development, database management, data analysis, and system integration, the project leverages technologies like ASP.NET, SQL Server, and intuitive user interface design to cater to users with varied technical skills. The expected outcomes include a user-friendly software application that automates and optimizes dairy operations, reduces resource wastage, and enhances profitability. Ultimately, the project strives to revolutionize dairy farm management through technological innovation, addressing the industry's growing demands for efficiency and sustainability.

1811. ARTVISTA: AND INNOVATIVE PLATFORM FOR ARTISTIC EXPLORATION AND COMMERCE

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

ArtVista is an innovative online platform dedicated to connecting artists and art enthusiasts through a marketplace and exhibition space, focusing on seven main art forms: Video & Animation, Photography, Sculpture, Painting, Architecture, Music, and Pottery. ArtVista allows artists to showcase and sell their artworks, accept customized orders, sell tools used for creating art, and manage events and exhibitions. The website features robust functionalities including user authentication, detailed product listings, custom order requests, event management, and a secure checkout process. By integrating modern technologies and a user-friendly interface, ArtVista aims to become a thriving community for artists and art lovers alike. Additionally, AI-driven features such as a smart chatbot for customer support enhance the user experience by providing instant assistance and improving overall platform efficiency.

1812. EASYFARMING APP

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Agriculture is a cornerstone of every country's economy, and for Pakistan, an agricultural nation, it plays a critical role in driving economic growth. Despite its importance, Pakistani farmers face significant challenges that hinder their ability to thrive. Recently, the government lowered crop prices, exacerbating the financial strain on farmers who already struggle with high costs for essential supplies like seeds and fertilizers. This policy change has intensified the difficulties for farmers who must

invest heavily in their crops but see diminishing returns. Moreover, the exploitation by middlemen adds another layer of hardship. These intermediaries purchase produce from farmers at substantially low prices, reaping large profits while the farmers themselves receive minimal compensation for their hard work. This system leaves farmers in a precarious financial situation, unable to earn a decent living or adequately support their families. The disparity between the costs of production and the returns on their crops creates a cycle of poverty and indebtedness among the farming community. Addressing these issues is crucial to improving the livelihoods of Pakistani farmers and ensuring the sustainability of the country's agricultural sector.

Few digital platforms worldwide have successfully addressed similar challenges. For instance, **FarmCrowdy** in Nigeria and **DeHaat** in India have transformed agricultural markets by enabling direct transactions between farmers and buyers, thereby ensuring better prices and logistical support. Inspired by these successes, the EasyFarming App aims to implement a likewise model tailored to the unique needs with Technology advancements of Pakistani farmers.

1813. SHEWORKS

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

The "SheWorks" project is an e-commerce platform dedicated to empowering female entrepreneurs by providing them with tools to sell handmade products. The system addresses cultural, language, and technical barriers through features like multilingual support, AI-driven product recommendations, secure payment methods, and automatic chat translations. The goal is to enhance the ability of women to manage their businesses online effectively, providing a seamless user experience for buyers and sellers alike.

1814. FLOWMIND AI

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

The diagrams are interactive, allowing users to customize nodes and connections, and the app is fully mobile-responsive, ensuring a smooth experience on any device. The project avoids complex AI features and focuses on offering a lightweight, user-friendly tool for basic diagram creation. Creating system diagrams like flowcharts, use case diagrams, sequence diagrams, and DFDs is time-consuming and often requires manual input, making the process prone to errors. Many tools in the market are overly complex, requiring deep knowledge of diagram structures and often being too slow or cumbersome to use for simple projects. Additionally, the lack of mobile-friendly tools makes it harder for users to work on diagrams across multiple devices.

1815. ARTISAN ALLEY: REDEFINING DIGITAL ART AND FOSTERING CREATIVE COLLABORATION

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

Artisan Alley is an innovative online platform designed to empower artists by providing them with a comprehensive space to showcase, promote, and sell their artwork while fostering a vibrant community. Unlike generic marketplaces that often prioritize transactions over creativity, Artisan Alley offers tailored solutions that cater specifically to the needs of artists and buyers alike. Key features include customizable artist profiles, the ability to upload time-lapse videos of the creative

process, AI-powered design assistance, and secure e-commerce functionalities with cash-on-delivery options. The platform enhances user engagement through interactive community features such as forums, reviews, ratings, and commission requests, creating a supportive ecosystem for both artists and buyers. By leveraging full-stack web development, user experience design, secure e-commerce practices, and advanced AI technologies, Artisan Alley aims to deliver a user-friendly and interactive experience that not only empowers artists to increase their visibility but also provides buyers with authentic and engaging interactions. Artisan Alley seeks to revolutionize the digital art marketplace by bridging the gap between creativity and commerce, ensuring that artists can effectively manage their portfolios while buyers enjoy a trustworthy and enriching art purchasing experience. Ultimately, the platform aspires to create a dynamic environment where creativity thrives, fostering connections and collaborations within the art community.

1816. GRANTGIVER

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

The GrantGiver project is a web platform designed to make it easier for people to find financial help and for donors to contribute to meaningful causes. It solves problems like complicated application processes, lack of transparency, limited donation options, and security issues that make it hard for people to get the support they need. This platform uses modern technology, such as artificial intelligence (AI) and secure payment systems, to connect donors and people looking for financial aid. It provides features like smart recommendations for donors, real-time updates on how funds are being used, and a strong verification process to ensure trust and security. The project is important because it creates a simple and transparent way for donors to see the impact of their contributions, and it makes the process of applying for grants easier and faster for those in need. It will benefit areas like education, healthcare, disaster recovery, and business support. By using skills in web development, database management, security, and AI, the GrantGiver platform will provide a reliable, user-friendly system that helps more people and organizations get the financial help they need. It aims to create a stronger connection between donors and recipients, making the process of giving and receiving help better for everyone involved.

1817. SOURCE CODE AND ARTIFACT MANAGEMENT MODEL (SCAMM)

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

Source Code and Artifact Management Model is designed to address the key challenges faced by software development teams when managing frequent client-driven changes and ensuring streamlined project workflows. In traditional systems, developers often work with separate tools for version control (e.g. Git) and task management (e.g., Jira, Asana), leading to fragmented workflows. This disconnect can cause poor visibility into project progress, delays in identifying bottlenecks, and misunderstandings between developers and clients. Unmanaged changes can lead to poor product quality, missed deadlines, and unnecessary rework. SCAMM solves this by offering an integrated platform. The platform integrates two core aspects of development—version control and task management—into a centralized system. Providing real-time access to all team members, the platform enhances coordination, efficient progress tracking and effective communication channel between team members and clients. To provide AI-based recommendations to improve project management. AI based solution recommendation to the development team by analyzing the problems available in the repository.

1818. TODDL:AR

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

The increasing reliance of toddlers on technological devices has become a growing concern for parents, particularly in Pakistan, where the widespread availability of smartphones has amplified this issue. Toddlers are often exposed to passive or unproductive content, which not only fosters addiction but also hampers their cognitive, social, and interactive growth. Recognizing the challenge, **Toddl-AR** aims to provide a positive and educational alternative to this trend by utilizing **Augmented Reality (AR)** technology.

Toddl-AR is designed as an interactive AR-based learning platform that assists parents in delivering engaging and effective pre-school education to their toddlers. By transforming the traditional learning experience into a fun and immersive process, the platform focuses on fostering cognitive, visual, language, and motor skills. Through personalized content, real-time progress tracking, and activity-based rewards, **Toddl-AR** motivates toddlers to explore new concepts, interact with educational material, and develop essential skills, while addressing their technology addiction in a constructive way.

The platform is tailored for the **Pakistani market**, taking into account local cultural, educational, and linguistic needs. It provides parents with tools to monitor their child's learning progress, customize educational content, and regulate technology use. With its user-friendly interface and advanced AR features, **Toddl-AR** bridges the gap between technology addiction and meaningful learning, offering a comprehensive solution to enhance early childhood education in a safe, enjoyable, and productive manner.

1819. TRADE GATE

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Current e Commerce website provide direct buy and sale products on the same platform. You can return ordered and tracking, while integrating feature like Chabot and biding for better prices. This approach enhances your productivity availability-built customer trust and increasing business profits.

1820. PASSENGER IMPORT SYSTEM

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

The Passenger Import System is a web application targeted at solving the world problem of urgent goods transportation. The central problem this project tries to solve is that traditional shipping methods take weeks or even months to send goods between borders. Such a delay is problematic because, when there is an urgent need to consume a product, it is available in some countries but not everywhere. As a result, the project will allow air travel to be used as a means for transporting goods to customers so the delivery period should not exceed a day. The importance of this issue is that in the world of globalization, faster and more efficient shipping becomes a necessity. Traditional freight services are always complicated, expensive, and very time-consuming. Within this system, passengers become couriers; most travel with free baggage space, making them flexible and cheap options for international shipping. The knowledge areas used in the project are web development technologies; specifically, HTML, CSS, JavaScript, Node.js, React, and the MERN stack. Additionally, the application will use Artificial Intelligence for personalized

recommendations; implement secure payment systems for users; and manage user profiles for safe transactions between the customer and the passenger. Added to this system will be the provision of chat communication among customers and passengers, AI-based matching algorithms, and verification process for the delivery of goods. The expected outcomes of this project are an efficient platform where the customers can post transportation requests, passengers can bid to transport goods, and both parties can communicate and complete transactions securely. In the end, it is expected that the system will reduce transportation time and provide an additional source of income for passengers and also give a reliable solution for urgent international deliveries.

1821. ZAM E-COM MARKET PLACE

Project Advisor	MR. USMAN AKBAR
Status	In Process of Completion

This document elaborates on the software design of the Zam E-commerce Marketplace, an advanced and innovative platform aimed at consolidating the three primary e-commerce models: B2B, B2C, and C2C. The platform streamlines diverse transactional processes, including the buying and selling of physical goods, digital products, and the booking of services. By addressing the inefficiencies and gaps present in the existing fragmented e-commerce landscape, Zam E-commerce Marketplace emphasizes accessibility, cost-effectiveness, scalability, and security. The platform is specifically designed to empower Pakistani businesses by providing global market access and improving their operational efficiencies while ensuring a seamless experience for all types of users.

1822. CODE ADVENTURES (C++ BEGINNERS)

Project Advisor	MS. AFIFA HAMEED
Status	In Process of Completion

The game Code Adventures (C++ Beginners) assists new or inexperienced users in comprehending fundamental programming concepts and understanding how programming is carried out. By offering both amusement and education, the game makes learning programming (ideally C++) more engaging for users while assisting them in grasping the fundamental ideas. Gamers take on thrilling tasks that test their ability to apply and reinforce coding skills, making complicated programming concepts simple and enjoyable through dynamic gameplay and hands-on problem-solving. This entertaining game combines education and entertainment to improve learning and comprehension of programming concepts.

1823. FOOTBAL ANOMALIES AND TACTICAL ANALYSIS

Project Advisor	MS. AFIFA HAMEED
Status	In Process of Completion

The manual analysis of football videos is a time-consuming and error-prone process. To address this issue, this project focuses on developing an **automated system for anomaly detection and tactical analysis** in football videos. The system aims to provide **accurate and efficient analysis** by identifying unusual events in gameplay and delivering tactical insights, such as player positions, movements, and ball trajectories.

The project leverages **machine learning** and **computer vision** techniques to process video frames and detect anomalies, such as unexpected player actions or game interruptions. It integrates a **tactical analysis module** that predicts player teams based on predefined colors, builds a tactical map to track player and ball movements, and analyses ball possession and passing dynamics.

The significance of this project lies in enhancing the **decision-making capabilities** of coaches, analysts, and fans by offering real-time insights into team strategies and gameplay. By automating the video analysis process, the system reduces the time and effort required for manual review, improves accuracy, and provides actionable insights.

The expected results include **high accuracy** in anomaly detection and tactical analysis, leading to improved coaching strategies, better team performance analysis, and enhanced fan engagement. The project will rely on **football match videos, player tracking data, and public datasets** for model training and validation.

In conclusion, this project will deliver a robust, scalable solution to revolutionize football video analysis, offering a new standard for efficiency and accuracy in sports analytics.

1824. STUDENT DOCUMENT DRIVE AND TASK MANAGEMENT SYSTEM

Project Advisor	MS. AFIFA HAMEED
Status	In Process of Completion

TASKUNITY: Student Document Drive and Task Management System is built to help students manage their academic tasks and documents more effectively. The platform combines task tracking, document organization, and plagiarism detection into one easy-to-use system. It solves problems like poor task management, scattered document storage, and lack of plagiarism checking in traditional systems. **TASKUNITY** helps students stay organized, ensures their work is original, and makes task management simpler.

In Phase 2, we're focusing on finalizing the design and building the prototype. Core features like document uploads, task assignments, and plagiarism checking are being added. The platform will also allow students to collaborate in real time, improving communication and productivity. We're using JavaScript and HTML/CSS for frontend development, while the backend is being set up to handle databases and APIs.

At the end of this phase, we will have a working prototype ready for testing, and we'll gather feedback to make improvements for a smoother user experience.

1825. COMMUNITYFIX

Project Advisor	MS. HAFIZA MARIA KIRAN
Status	In Process of Completion

CommunityFix is a web-based platform designed to streamline the reporting and resolution of societal and household issues within communities. The project addresses the inefficiencies in current complaint management systems by providing a centralized platform where residents can report problems, view others' complaints, and give feedback. The significance of this system lies in fostering accountability, transparency, and collaboration among community members, mechanics, and administrators.

The platform leverages knowledge areas such as software engineering, database management, and front-end and back-end development to deliver a seamless user experience. Key features include issue categorization, voting, comment sections, and real-time notifications. Admins can assign tasks to mechanics, prioritize issues based on community feedback, and generate detailed reports for analytics. The voting system and feedback mechanism empower residents to highlight pressing concerns, while mechanics can efficiently address assigned tasks.

The anticipated results include improved issue resolution times, enhanced community engagement, and a more organized approach to addressing local problems. By bridging the gap between residents, administrators, and service providers, CommunityFix aims to create smarter and more connected communities.

1826. BIG BELLY- FOOD SURPLUS SHARING APP

Project Advisor	MS. HAFIZA MARIA KIRAN
Status	In Process of Completion

Big Belly is an app that solves the problem of food surplus by connecting those who want to sell to those who want to buy it.

This app gathers great significance by solving the problem of extra food going to waste. In the Big Belly, app people can buy and sell food based on their needs and interests. If one needs to sell their extras all they need to do is click a picture and upload it on the Big Belly app. The picture will be displayed in the feed to the nearby users in the area. Users can see various healthy dishes in the feed of the app and can choose to get them delivered or perform pickup.

By leveraging the Flutter framework, we would make an app that stands consistent with user needs and solves the problem seamlessly. An app that can provide a nice visual appeal and overall user experience. To make food accessible, GPS-based location services will be provided so that users can locate nearby homes that have surplus food with them. App will be providing users with options to give ratings and reviews to the dishes they have ordered, so others will be able to see user ratings which will help maintain mutual trust and accountability.

This app allows people to buy affordable food while solving the problem of surplus food. Through the Big Belly app, food resources will be handled effectively and will be redistributed from public to public. Big Belly app will help humans make a real difference in the world by redistributing surplus food and solving world hunger once and for all.

A problem so big, solved by an app so compact!

1827. VISTELLIGENCE

Project Advisor	MS. HIRA ASIM
Status	In Process of Completion

Vistelligence is an AI-powered web application designed to make the visa application process smoother and more accessible for individuals by analyzing a user's unique profile, including factors like education, financial situation, and career aspirations, to deliver tailored recommendations for visa types, countries, and universities. The platform goes beyond suggestions by predicting visa approval chances, providing interview preparation tools, and offering practical guidance on document preparation, financial planning, and risk management. What sets Vistelligence apart is its focus on enhancing the user experience, with features like a dynamic visa cost estimator to help users budget effectively and an interactive community forum that fosters peer-to-peer support and knowledge sharing, reducing the stress of navigating complex processes while creating a sense of community among users pursuing similar goals. Built on real-time data and advanced AI algorithms, Vistelligence ensures accuracy and reliability in its recommendations, empowering users to make confident decisions about their global mobility journey. Whether seeking to travel, study, or invest abroad, Vistelligence serves as a comprehensive solution, streamlining every step of the process and transforming overwhelming procedures into manageable steps, enabling users to focus on achieving their dreams and building brighter futures on an international stage.

1828. INTELLIGENT TUTORING SYSTEM (ITS) BASED ON LEARNERS AFFECTIVE STATES

Project Advisor	MS. LALAEN SULTAN
Status	In Process of Completion

The development of an Intelligent Tutoring System (ITS) tailored to learners' emotional and cognitive states represents a significant advancement in educational technology. This project focuses on detecting and addressing learner frustration, a critical factor influencing engagement and learning outcomes. By integrating multimodal inputs—such as facial expressions, voice tone, and behavioral cues—the proposed ITS monitors frustration in real-time during reading, speaking, and assessment tasks. Adaptive feedback mechanisms, including motivational prompts, task adjustments, and hints, aim to mitigate frustration, sustain engagement, and optimize academic performance. Leveraging artificial intelligence, affective computing, and educational psychology principles, the system dynamically adjusts content difficulty to balance emotional and cognitive demands. This research contributes to the field of adaptive learning by addressing limitations in traditional ITS, which often lack real-time emotional adaptation. The anticipated outcome is a personalized, responsive learning environment that enhances user experience and educational effectiveness, setting a new benchmark for adaptive learning systems.

1829. A PREDICTIVE MODEL FOR SLEEP INTERRUPTIONS

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	In Process of Completion

This project will develop an overnight awakening prediction mobile application that takes in user-provided data such as dietary habits and sleep patterns and real-time environmental conditions like noise, light, and temperature. Using machine learning techniques, it would develop models to produce personalized recommendations for improving one's quality of sleep. Biological, environmental, and behavioral data are considered to fill a gap in the research on sleep; the application is designed as cross-platform, hence access, privacy, and performance.

1830. DETECTING ALZIMER'S DISEASE IN MRI SCANS WITH THE HELP OF DEEP LEARNING

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

This project aims to develop an AI-powered system that automates the detection of Alzheimer's disease and brain tumors from MRI scans using deep learning algorithms, specifically Convolutional Neural Networks (CNNs). Early and accurate detection of these conditions is critical for improving treatment outcomes, yet traditional methods are often slow and prone to human error. By automating the analysis of MRI scans, the system enhances diagnostic accuracy, speeds up the process, and provides reliable results, reducing the burden on healthcare professionals. The system processes MRI scans, classifies them into categories such as Alzheimer's, brain tumor, or normal, and generates detailed diagnostic reports. Designed to be scalable, the system offers an accessible solution for hospitals and clinics, particularly in underserved areas with fewer specialists. It also ensures compliance with healthcare regulations like HIPAA and GDPR, focusing on patient data security and privacy. Overall, this AI-based tool aims to improve diagnostic efficiency and contribute to better healthcare outcomes by enabling faster, more reliable disease detection.

1831. CARLAB (ALL IN ONE PLATFORM PROVIDING EFFICIENT AND RELIABLE CAR SERVICES)

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

CARLAB is an all-in-one automotive care platform designed to streamline car services by consolidating them into a single, user-friendly application. It addresses the fragmentation of car care by integrating essential services such as car cleaning scheduling, a competitive vehicle buying/selling system, and access to trusted maintenance services and genuine parts. This eliminates the inefficiencies of using multiple platforms for these tasks, saving time, enhancing convenience, and ensuring transparency and quality. Key features include secure payment options, real-time service updates, AI-powered customer support, and flexible service delivery methods (e.g., workshop visits, pick-ups, or on-site services). CARLAB also incorporates a dynamic bidding system for buying and selling vehicles, making the process more market-driven and competitive. The app uses agile development to adapt to user needs and market trends, focusing on mobile app development, UI/UX design, secure payments, real-time data, AI integration, and business logic for scheduling and bidding systems. By improving customer satisfaction, streamlining the service booking process, and boosting efficiency in vehicle transactions, CARLAB transforms the automotive care experience. It provides a secure, reliable, and efficient solution, benefiting both car owners and service providers and offering a comprehensive, all-in-one platform for managing automotive needs.

1832. APNI BHOK

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

"Apni Bhook" is a web platform designed to help Muslims living in foreign countries to prepare Halal meals at home. When Muslims move to another country, finding Halal meals and products can be challenging, which affect their culture, health and connection. The platform features a **Halal Recipe Recommendation System**, which provides suggestions based on the user ingredients and their preferred cuisine. Additionally, users can post their own recipes, rate, and review others' recipes. User also give feedback to recipes. There's also a chatbot that suggests recipes according to users' mood preferences. "Apni Bhook" connects users with local vendors who provide Halal products, requiring vendors to upload verified Halal certificates. This feature supports local businesses and fosters a community for sharing food experiences.

1833. WISEPRICE

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

"WisePrice" is a web-based platform aimed at helping new start-ups set the right price for their products. One of the toughest challenges for entrepreneurs when launching a business is determining how much to charge for their products. With many factors like production, marketing, and transportation costs to consider, it can be hard to strike the right balance between covering expenses and making a profit. WisePrice simplifies this process by allowing users to input their costs and desired profit margin, then recommending a price based on these factors. The goal of the platform is to take the guesswork out of pricing, making it easier for start-ups to confidently launch their products with a price that supports both profitability and market competitiveness. By combining practical cost analysis with an easy-to-use interface, WisePrice aims to help new businesses succeed right from the start.

1834. NFT MARKETPLACE WITH ADVANCED AUTHENTICATION

Project Advisor	MS. MAHAM MEHER AWAN
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Status	In Process of Completion
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The abstract introduces a decentralized NFT marketplace that prioritizes authenticity, originality, and security. Traditional NFT platforms face challenges such as duplicate content uploads, lack of secure user authentication, and unverified transactions. The proposed system integrates image recognition algorithms to identify duplicate or plagiarized NFTs before listing, ensuring only unique and original works are available on the platform. Additionally, blockchain technology provides robust, transparent, and tamper-proof transactions through Ethereum-based smart contracts. User authentication is enforced using wallet verification and secure identity management. This project aims to fill gaps left by existing platforms like OpenSea and Rarible by building trust and confidence among users while fostering a secure ecosystem for digital asset trading.

1835. CROCHET PATTERN PRO- ENHANCING ACCURACY AND CREATIVITY FOR CROCHET DESIGNERS

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	In Process of Completion

Crochet is a way of creating fabric using yarn and a hook. The process of designing patterns for crochet projects is traditionally manual, much like the art of crochet itself. We propose to build a web-based pattern editor to assist designers in creating crochet patterns more accurately and generating corresponding instructions. Additionally, the platform will allow designers to share their patterns with a community of crochet enthusiasts. To support skill development, the platform will also provide access to crochet-related learning materials.

1836. WEE CARE

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	In Process of Completion

Many parents, especially young mothers, face challenges in managing their child's care and their own health without regular support from family or expert advice. Most child care apps available today offer scattered solutions and miss important features like personalized meal plans, physical activity recommendations, vaccination schedules, and emotional support for parents. This highlights the need for a single app that brings all these features together while considering cultural and local needs. The Wee Care app takes a complete approach to child and maternal health by offering tools like growth tracking, month-by-month solutions for common problems, personalized diet plans, and simple DIY remedies. These features help parents actively care for their child's development and overall well-being.

Wee Care offers professional assistance and real-time, individualized guidance using an intelligent natural language processing *AI chatbot*. By putting parents in touch with local resources and medical specialists, it also fosters a sense of community while guaranteeing accessibility and cultural relevance. The app is built using *Open AI API* to enhance the *chatbot*, Node.js and MongoDB for secure and real-time backend support, and React Native for compatibility on different platforms. The goal of this Wee care project is to create an all-in-one platform that uses technology and innovation to make parenting easier, reduce stress for parents, and improve the health of both mothers and children.

1837. INFLUENCER SPHERE

Project Advisor	MS. RUBAB JAVAID
Status	In Process of Completion

The content marketing industry faces inefficiencies in connecting brands with the right content creators, resulting in misaligned campaigns and wasted resources. Brands struggle to identify creators whose work aligns with their values and goals, while creators face challenges in showcasing their expertise and securing fair compensation. These gaps hinder collaboration and the effectiveness of marketing strategies.

This project aims to address these challenges by developing a web-based SaaS platform that streamlines brand-creator interactions. Key features include a dynamic bidding system enabling brands to post project briefs and receive tailored proposals from creators, fostering innovation and efficiency. An advanced influencer recommendation engine evaluates creators based on content relevance, reach, and past performance, ensuring optimal campaign matches.

1838. SWIFTLOGIX

Project Advisor	MS. RUBAB JAVAID
Status	In Process of Completion

SwiftLogix is an advanced web application designed to revolutionize the logistics and delivery industry. It addresses critical inefficiencies by integrating real-time tracking, temperature monitoring for sensitive products, and Chatbot customer support. The platform aims to improve transparency, efficiency, and customer satisfaction in the logistics sector. Key features include online label printing, product insurance, payment gateway system, and freelance rider integration. SwiftLogix sets a new standard in logistics by enhancing reliability, transparency, and overall user experience.

1839. CRYCARE: INTELLIGENT BABY CRY RECOGNITION AND HEALTHCARE ASSISTANT

Project Advisor	MS. RUBAB JAVAID
Status	In Process of Completion

CryCare: Intelligent Baby Cry Recognition and Healthcare Assistant is a cutting-edge system designed to alleviate the challenges faced by parents in understanding their baby's needs. By harnessing advanced machine learning techniques and robust audio signal processing methods, CryCare identifies and categorizes baby cries into five distinct types: **hunger, discomfort, belly pain, burping, and tiredness**. The system combines these insights with healthcare suggestions delivered through a seamless mobile application.

The application integrates a comprehensive backend developed using Node.js and MongoDB, ensuring real-time analysis and secure user data management. The machine learning models, trained on an optimized dataset, utilize features such as MFCCs, Chroma, and Spectral Contrast for superior accuracy. CryCare is envisioned as an essential tool for modern parenting, enhancing both convenience and the quality of infant care.

1840. FREIGHT FORCE

Project Advisor	MS. RUBAB JAVAID
Status	In Process of Completion

The Freight Force project to enhance the logistics and supply chain management processes through the development of an efficient freight tracking and management system. The problem addressed is the inefficiency and lack of transparency in current freight operations, which often lead to delays, mismanagement, and financial losses. The significance of the problem impact on businesses, especially

those relying on timely and accurate freight delivery for operations. Key knowledge areas utilized in the project include software development, database management, system architecture, artificial intelligence.

1841. PIXEL PRO

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

The project, Pixel Pro, is a dedicated platform crafted for photographers, merging the functionality of gig-based service platforms with a secure marketplace for photography equipment and AI-powered editing tools. Addressing key challenges in the photography industry, Pixel Pro enables photographers to create gigs with a review-based ranking system, allowing clients to choose services based on quality and reputation. Additionally, Pixel Pro includes a marketplace for buying, selling, and renting equipment, with SERIAL NUMBER -based verification mechanisms to minimize the risk of fraud. The platform also integrates an AI-powered photo editing module, providing an efficient tool for photographers to enhance images quickly, streamlining their workflow. This project is significant as it addresses the needs of photographers who currently rely on generalized freelance and resale platforms, which lack industry-specific tools and security features. By leveraging gig economy principles, secure marketplace practices, and AI technology, Pixel Pro aspires to enhance visibility, credibility, and efficiency for photographers at all levels, ultimately creating a safer and more tailored environment for their business activities.

1842. SPARECRAFT (AI-POWERED)

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

SpareCraft is an innovative auto spare parts e-commerce platform tailored for Suzuki car owners. Unlike traditional solutions that rely on static 3D visualization, SpareCraft incorporates an AI-powered chatbot to recommend personalized modifications for Suzuki models. The chatbot offers tailored suggestions for spare parts including alloy wheels, bumpers, lights, and spoilers and connects users with trusted mechanic for purchasing and installation.

By addressing the significant gap in e-commerce platforms—the lack of interactive and informed assistance SpareCraft simplifies decision-making and enhances customer satisfaction. This project combines AI-driven personalization with a user-friendly shopping experience to revolutionize the way car spare parts are selected and purchased.

1843. WILDSCAN: A COMPREHENSIVE PLATFORM FOR WILDLIFE CONSERVATION, IDENTIFICATION AND MARKETPLACE OF PLANTS

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

1844. AUTO SEO TOOL

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

In today's digital era, our groundbreaking project aims to transform the landscape of online content visibility. We proudly introduce an automated SEO optimization tool designed to streamline and enhance the process of boosting online content. This innovative tool offers users a seamless experience through easy log-in options, either through a simple form or Google authentication, granting instant access to a personalized dashboard. At the heart of our tool's functionality is the effortless uploading of product images, complemented by user-input descriptions. The magic happens when users initiate the optimization process, leading to the generation of a meticulously crafted Excel file. This file serves as a comprehensive guide, featuring essential SEO elements such as keywords, title suggestions, descriptions, categories, and tags. What sets our tool apart is its empowering capability, providing users with a dynamic approach to enhance their online content's SEO performance. By offering a userfriendly interface and generating a detailed roadmap for optimization, we empower individuals and businesses alike to take charge of their online presence. The tool's efficiency lies in its ability to cater to a diverse range of users, from beginners to seasoned marketers, offering a practical solution to navigate the complexities of SEO. As the digital landscape evolves, staying ahead in search engine rankings becomes paramount, and our tool serves as the catalyst for achieving this goal. In essence, our project is not just a tool; it is a comprehensive solution tailored to meet the evolving needs of the online content landscape. It is a dynamic force that propels users towards greater visibility, increased traffic, and a robust online presence. Embrace the future of online content optimization with our revolutionary SEO tool, and witness the transformation of your digital footprint.

1845. EXPENZA: SECURE BUDGET MANAGER WITH ID SCAN AND SHARIAH-COMPLAINT COMMITTEE

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

The EXPENZA platform aims to simplify personal finance management through automated expense tracking combined with traditional committee-based savings and AI chatbot that give suggestions according to out expense. The system enables users to securely submit CNIC information for verification, track their expenses, and receive personalized budgeting tips based on their financial goals and spending habits. By integrating modern budgeting tools with traditional saving method committee, the platform helps users manage finances more efficiently.

1846. CRICKFUSION: COMPREHENSIVE CRICKET PERFORMANCE AND PREDICTION PLATFORM

Project Advisor	MS. SAIRA LATIF
Status	In Process of Completion

CrickFusion is a comprehensive cross-platform application that transforms cricket performance management and prediction. This project addresses the need for integrated tools for player management, performance analytics, tournament organization, and predictive analytics in the cricket domain. By leveraging advanced data visualization techniques and machine learning models, CrickFusion will provide players, coaches, and clubs with insightful analytics and accurate performance predictions. The application will enhance decision-making processes, simplify tournament management, and offer a seamless user experience across web and mobile platforms.

1847. TRUCKLOAD PK: EFFICIENT LOAD MANAGEMENT FOR TRUCKING IN PAKISTAN

Project Advisor	MS. SAIRA LATIF
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Status	In Process of Completion
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TruckLoad PK is a digital platform designed to optimize Pakistan's trucking industry by addressing inefficiencies like **empty return trips** and high operational costs. With features such as **real-time load posting**, **GPS-based route optimization**, the platform enhances transparency, reduces wastage, and boosts profitability for stakeholders. Leveraging modern technologies and scalable architecture, the project aims to transform logistics operations, benefiting shippers, truck owners, and drivers alike.

1848. JOBFESTA: AI BASED WEBSITE

Project Advisor	MS. SAIRA LATIF
Status	In Process of Completion

Job Fiesta is an AI-powered job matching platform designed to revolutionize the job search process by efficiently connecting job seekers with recruiters. The platform addresses the need for organized solution that streamlines the job search process, reduces the time and effort required to find suitable candidates, and enhances the overall job search experience.

The problem lies in the traditional job search process, which often relies on manual resume screening, inefficient communication channels, and limited candidate recommendations. Job Fiesta solves this problem by offering a comprehensive platform that combines personalized job recommendations, automated resume generation, a built-in chatting feature, and a rating system for job seekers based on their communication skills and professionalism.

The platform also features a recommendation system for recruiters to find suitable candidates, ensuring that job seekers are matched with relevant job opportunities. By leveraging machine learning algorithms, Job Fiesta creates a community-driven platform where job seekers and recruiters can interact, share information, and provide feedback on the job search process.

Key knowledge areas applied in the development of Job Fiesta include artificial intelligence, machine learning, web development, user experience design, and data analytics. The expected result is a useful, collaborative platform that meets the needs of both job seekers and recruiters, offering a hassle free job search experience and improving the overall efficiency of the job market.

1849. VOICE-DRIVEN CODE EDITOR

Project Advisor	MS. SAIRA LATIF
Status	In Process of Completion

VoxCode is an innovative mobile application that enables voice-driven coding on Android, creating an accessible, hands-free coding environment for individuals with disabilities and enhancing productivity for all users. With capabilities like real-time code collaboration and error handling through voice commands, VoxCode leverages advanced voice recognition to redefine coding accessibility and functionality.

1850. EPICEVE: POWERING YOUR EVENTS WITH INNOVATION

Project Advisor	MS. SAIRA LATIF
Status	In Process of Completion

Epiceve is an integrated event management system built on **Odoo** to streamline various processes, including customer bookings, invoicing, inventory management, and manufacturing. It provides a unified solution for event managers to efficiently handle tasks such as customer registration, purchase order management, and production tracking. The system also features seasonal menu deals, automated

reminders, and basic integrations with WhatsApp and ChatGPT for enhanced customer interaction. **Epiceve** is designed for scalability, offering both cloud-based and on-premise deployment options, with the goal of improving operational efficiency, reducing data errors, and cutting operational costs for event management companies.

1851. CURIOCAMPUS: PEER-TO-PEER COLLABORATION PLATFORM

Project Advisor	MS. SARAH JAVAID
Status	In Process of Completion

CurioCampus is a peer-to-peer collaboration platform designed to address the challenges faced by students in academic collaboration. It offers intelligent matchmaking, emergency help, and real-time communication features tailored to enhance teamwork and productivity. By integrating advanced technologies like machine learning, real-time collaboration tools, and Firebase Realtime Database, CurioCampus simplifies the process of finding academic collaborators, managing tasks, and meeting deadlines.

The platform includes a smart pairing talent matrix that connects students based on their skills and project requirements. Additionally, its Emergency Peer Request feature provides immediate assistance during critical situations like project deadlines. CurioCampus fosters collaborative learning through its shared workspaces, which allow file sharing, task management, and real-time progress tracking.

This project aims to empower students by offering a seamless, supportive academic community while also allowing them to build and showcase their academic portfolios for future endeavors.

1852. LAPTOPIA: SMART LAPTOP SELLING MARKETPLACE WITH AI RECOMMENDATION SYSTEM

Project Advisor	MS. SARAH JAVAID
Status	In Process of Completion

LAPTOPIA is a cutting-edge online marketplace designed to revolutionize the laptop sale and purchase experience. The platform addresses the significant problem of fragmented information and overwhelming choices in the laptop market, which can make decision-making cumbersome and inefficient for users. By integrating an **AI-powered recommendation system**, LAPTOPIA provides personalized laptop suggestions based on user preferences, budget, and usage requirements, ensuring informed purchasing decisions.

The platform's **runtime price comparison feature** aggregates real-time pricing from multiple e-commerce sites, empowering users to secure the best deals without extensive manual searches. Leveraging knowledge areas such as machine learning, web development, and e-commerce systems, LAPTOPIA combines user-friendly interfaces with powerful backend processing.

The significance of this project lies in its ability to simplify complex buying decisions and promote transparency in pricing. The results include enhanced user satisfaction, increased accessibility to accurate product data, and the creation of a sustainable marketplace benefiting both buyers and sellers. LAPTOPIA serves as a scalable and innovative solution to modernize the laptop purchasing journey.

1853. VOCAKIDS

Project Advisor	MS. SARAH JAVAID
Status	In Process of Completion

VocaKids is a cutting edge smart phone app that uses cutting edge speech recognition technology to provide real time feedback to help kids pronounce words more accurately in Urdu. By offering a

helpful, engaging, and kid friendly platform, the app tackles a significant problem encountered by young learners, particularly those who are learning Urdu as a second language or who have speech impairments. In order to create a cycle of repetition that promotes language learning, the program employs speech recognition to assess pronunciation accuracy and offers prompt feedback such as OK for accurate pronunciations and encouraging cues such as speak again for poor ones.

This initiative is significant because it has the ability to improve children voice clarity and language skills in an entertaining and nonthreatening way. VocaKids guarantees a productive and successful learning environment by combining the usage of Flutter for a smooth, interactive front end experience and PostgreSQL for safe user data storage. The software is appropriate for a variety of learners since it not only attempts to enhance kid communication abilities but also offers a fun and approachable speech treatment tool.

This project makes use of key expertise areas in database administration, mobile application development, user experience design, and speech recognition technologies. Improved pronunciation, greater learning engagement, and an intuitive interface that makes language acquisition fun and efficient are the outcomes anticipated from this project. VocaKids has the potential to be an effective tool in educational and therapeutic settings, assisting kids with speech issues and boosting their self esteem in verbal communication abilities.

1854. CAMPUSMATE: PROVIDING UNIVERSITIES INFORMATION TO ALL STUDENTS ACROSS PAKISTAN

Project Advisor	MS. SARAH JAVAID
Status	In Process of Completion

CampusMate is a web platform designed to simplify the process of finding the right university for students across Pakistan. By allowing students to input their academic details, preferences, and budget, CampusMate provides personalized university recommendations. The platform also helps students discover scholarships and find nearby hostels with an automated booking system showing real-time room availability. Unlike other platforms, CampusMate combines all necessary information in one place—university comparisons, smart recommendations, and Google Maps integration for location visualization. Its goal is to make the university selection process stress-free and efficient, helping students make well-informed decisions about their education.

1855. SMART CHATBOT

Project Advisor	MS. SIDRA NOUREEN
Status	In Process of Completion

The rise of online communication platforms demands advanced, secure, and user-friendly chat-bots. However, current systems lack intelligent personalization, robust safety, and multilingual capabilities, leading to subpar user experiences. This project seeks to overcome these challenges by developing a next-generation chat-bot system that integrates cutting-edge technologies for a safer and more engaging experience.

This project proposes a next-generation chat-bot system that incorporates AI-based interaction, content moderation, message summarization,, and on-the-fly translation in order to create a safe and convenient chat experience. It provides the necessary features where most of existing chat-bots, lacks by not giving conversational type of intelligent privacy space and safety, cross language conversation. Its row grid system is intended to help you drive better and safer while portraying promoting global communication.

1856. SMART VIDEO INSIGHTS

Project Advisor	MS. SIDRA NOUREEN
Status	In Process of Completion

Video content is an essential part of digital communication but often presents accessibility barriers due to language differences, length, and lack of searchable metadata. This complexity makes it difficult for non-native speakers or time-constrained users to fully engage with video content. To address these challenges, we propose a Smart Video Insights platform that leverages advanced technologies to automatically translate spoken language in videos, generate concise summaries, and extract key metadata such as titles and themes. This system aims to enhance video accessibility and usability, making it easier for users to consume content in various languages and formats. By utilizing machine learning, speech recognition, machine translation, and natural language processing (NLP), this platform seeks to improve video content consumption efficiency and searchability, offering a valuable tool for diverse audiences across different contexts.

1857. WEALTH WISE: COMPREHENSIVE CONSULTANCY FOR FINANCE AND EMERGING MARKETS

Project Advisor	MS. USHNA KHALIL
Status	In Process of Completion

Wealth Wise is an Android-based mobile application designed to provide financial consultancy and international stock trading services, targeting novice and seasoned investors in emerging markets like Pakistan. The app integrates APIs for real-time stock data, uses Google Firebase for backend data management, and provides a secure, user-friendly interface built with Java and XML. Features include educational resources, expert consultancy, and seamless integration with Trading View APIs for advanced charting tools. This project prioritizes accessibility, compliance with international regulations, and user security to enhance financial literacy and informed investment decisions.

1858. SERENITY SPACE: AI-POWERED CHATBOT FOR MENTAL WELLNESS

Project Advisor	MS. USHNA KHALIL
Status	In Process of Completion

"Serenity Space" is a mobile application designed to support mental wellness through personalized, AI-driven interactions. Moving towards better mental health can be challenging, especially in fast-paced environments where immediate and accessible support is lacking. "Serenity Space" features a Mental Wellness Chatbot that provides mood-specific support, motivational quotes, mindfulness activities, and guided meditation recommendations tailored to the user's current state of mind.

The platform also fosters a community where users can share mental wellness tips, rate and review coping techniques, and provide feedback to improve content quality. Additionally, "Serenity Space" integrates with mental health professionals and services, offering verified resources for users seeking deeper support. This project aims to bridge the gap between professional mental health care and daily emotional self-care through innovative AI technology.

1859. POLICE SURVEILLANCE SYSTEM

Project Advisor	MS. USHNA KHALIL
Status	In Process of Completion

The **Police Surveillance and Criminal Tracking System** aims to address the critical challenges faced by law enforcement agencies in developing countries, such as **inefficient criminal identification, inadequate tracking, and poor coordination**. By integrating **biometric technologies**, including **fingerprint and facial recognition**, the system enhances criminal identification accuracy at checkpoints. **Real-time tracking** and geofencing features enable efficient monitoring of suspects' movements and rapid response to incidents. Additionally, predictive analytics will assist in **identifying high-crime areas**, optimizing patrolling, and ensuring better resource allocation. The system includes communication tools for officer coordination and an **SOS** function for officer safety. The project leverages **web and mobile development, data analytics, and GPS** technologies to create a comprehensive solution, aiming to improve operational efficiency, reduce crime rates, and increase public trust in law enforcement. The anticipated outcome is a safer and more organized law enforcement environment.

1860. HAAZIR MECHANIC

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

The "Haazir Mechanic" project is an AI-Powered Automotive Repair Assistance system that simplifies vehicle repair by connecting users with nearby mechanics, providing accurate cost estimates, and offering real-time troubleshooting via an AI chatbot. This app aims to enhance user experience through transparent budgeting, reliable mechanic matching, and personalized assistance. Future developments may include IoT integration for real-time diagnostics and broader service coverage.

1861. FARMEASE

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

FarmEase is a Flutter application aimed at revolutionizing the agricultural marketplace by connecting farmers with buyers efficiently. The app leverages advanced AI-based image recognition, voice-to-text input, and supply-demand analytics to provide a seamless platform for product management and purchase of fresh farm produce. This project addresses the gap between farmers and buyers, enhancing the user experience and communication. By integrating GPS-based services and fostering local commerce, FarmEase aspires to modernize agricultural interactions, resulting in a dynamic and optimized marketplace.

F24-BSDS

1862. PREDICTING PROTEIN-LIGAND BINDING AFFINITY

Project Advisor	DR. MUZAMMIL HUSSAIN
Status	In Process of Completion

This project focuses on developing a machine learning-based platform to predict protein-ligand binding affinity. Protein-ligand binding is a crucial aspect of drug discovery, where understanding how well a drug molecule (ligand) binds to a protein target can guide therapeutic development. Traditional experimental methods are slow, costly, and resource-intensive, making computational solutions vital. Our platform uses advanced algorithms like Random Forests and Graph Neural Networks to predict binding affinity efficiently. By leveraging bioinformatics datasets such as GEO and TCGA, the project aims to improve drug discovery efficiency and enable researchers to identify potential drug candidates faster. The platform provides visualizations, statistical analysis, and comprehensive data interpretation to assist researchers in making informed decisions. Ultimately, this platform seeks to accelerate biomedical research while maintaining high accuracy and generalizability.

1863. AI-ENTERPRISE MANAGEMENT (AEM)

Project Advisor	DR. MUZAMMIL HUSSAIN
Status	In Process of Completion

AI-Enterprise Management (AEM) aims to revolutionize ERP systems by introducing:

1. **OCR for Automated Data Entry:**

Extract and categorize data from scanned invoices, receipts, and bills using transformer-based models like Donut, fine-tuned on datasets such as SROIE and CORD.

2. **AI Assistant for Intelligent Insights/Entries:**

A generative AI which help in making JV from a simple plain text and chatbot powered by T5 or LangChain or anyother, providing conversational access to ERP data.

3. **Advanced Security Mechanisms:**

Role-Based Access Control (RBAC) and anomaly detection ensure data security and user accountability.

This project streamlines operations, automates repetitive tasks, and delivers real-time insights.

1864. BIZBOT: AI BASED BUSINESS MANAGEMENT SYSTEM

Project Advisor	DR. NAVEED HUSSAIN
Status	In Process of Completion

BizBot is an AI-based business management system designed to enhance the efficiency of retail operations. This project addresses significant inefficiencies in business operations such as the lack of real-time insights, inadequate product availability information, and ineffective inventory control across branches. These issues often result in lost sales and poor customer experiences. To solve these challenges, BizBot integrates several key technologies: a centralized data warehouse for real-time data processing, predictive analytics for sales forecasting and inventory optimization, and a multi-mode AI chatbot for customer and admin support.

The significance of this project lies in its potential to transform retail management through automation and advanced analytics, leading to more informed decision-making and improved operational efficiencies. By using knowledge areas including database management, machine learning,

natural language processing, and data visualization, BizBot aims to provide actionable insights and provide interactions between customers and businesses.

The expected results include a reduction in operational inefficiencies, better inventory management, enhanced customer service, and a platform for business intelligence. The implementation of real-time visualization tools and automated invoice generation via WhatsApp will further increase customer communication and satisfaction, positioning retail businesses for success in a competitive market.

1865. ENHANCING APP FEATURES THROUGH REAL-TIME USER REVIEWS

Project Advisor	DR. NAVEED HUSSAIN
Status	In Process of Completion

This project helps app developers improve their apps by automatically analyzing real-time user feedback. Today, app developers have to go through thousands of reviews to find out what users like, dislike, or want to see improved. This takes a lot of time and effort. Our project uses Natural Language Processing (NLP) and machine learning to sort through these reviews, find important feedback, and suggest ways to make the app better.

The system collects user reviews from different sources and identifies common problems or new feature ideas based on what users are saying. It highlights urgent issues like bugs, suggests new features, and shows trends in user feedback. Through a dashboard, developers can easily view these insights and take action quickly. The system also compares feature with those of competing apps, so developers can find ways to stand out in the market. By making it easier to understand and respond to user needs, this project will help apps stay relevant and keep users happy.

1866. SHE SHIELD

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

SheShield is an innovative IoT-driven safety system designed to proactively enhance personal security for women and vulnerable individuals through a robust integration of hardware and software components. Addressing the limitations of existing reactive solutions, SheShield offers real-time location tracking, geo-fencing alerts, emergency notifications via SMS/WhatsApp, and automatic audio/video evidence recording during critical incidents. Leveraging multi-protocol communication (Bluetooth, GSM, WiFi, LoRa), the system ensures reliable connectivity even in low-network environments, while machine learning algorithms analyze crime patterns to identify high-risk areas and inform preventive strategies. The system comprises IoT devices embedded with GPS, accelerometers, and cameras, paired with user-friendly mobile and web applications for device management, route customization, and emergency response. A cloud-based analytics platform enables secure data storage, real-time processing, and actionable insights for law enforcement. Compliance with GDPR and ISO 27001 standards ensures end-to-end encryption and user data privacy. By merging proactive safety features, seamless cross-technology integration, and data-driven crime prevention, SheShield bridges the gap between individual security and public safety. Its scalable architecture supports concurrent user operations, low-latency alerts (<5 seconds), and fallback mechanisms for uninterrupted functionality. Designed as a holistic solution, SheShield not only empowers users with immediate protection but also contributes to broader societal impact by fostering safer communities through technological innovation.

1867. EXAM EASE

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

The Exam Ease (EE) system is designed to transform, automate and streamline the examination process. It aims to replace the traditional manual methods of the examinations with the automated workflows that ensure a seamless, efficient, and secure experience for students, teachers, and administrators. This system leverages modern technologies such as QR code scanning, face recognition, GPS tracking, and cloud-based platforms to enhance the accuracy and reliability of the exam-related operations. Traditional manual processes are prone to errors and inefficiencies, undermining exam integrity. The EE system incorporates advanced technologies like QR code scanning, device validation, GPS tracking, and face recognition into a unified platform. By automating key tasks, it reduces administrative workload, enhances exam security, and fosters a more efficient examination environment. The system features a web-based admin panel and mobile apps, providing real-time insights and notifications to administrators, students, and teachers. The Exam Ease system is a robust, secure, and user-friendly solution that modernizes the examination process in educational institutions. It helps streamline operations, improve efficiency, and enhance security, making it a valuable tool for institutions aiming to move towards a more digital and automated exam management system. By adopting the Exam Ease, the educational institutions can improve their exam-related operations, reduce the administrative workload, and offer a more secure and transparent exam experience for the students and faculty alike. It significantly reducing the administrative burden.

1868. IOT ENABLED DATA SCIENCE-DRIVEN CROP HEALTH MANAGEMENT FOR PAKISTANI FARMERS

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

Agriculture is the backbone of Pakistan's economy, yet it faces numerous challenges such as declining productivity, inefficient resource utilization, and the adverse effects of climate change. Traditional farming methods often rely on intuition rather than data, leading to suboptimal decision-making and resource wastage. This project aims to revolutionize farming practices by developing a Smart Agricultural Advisory System that integrates IoT and data analytics to provide real-time Alerts for farmers. The system integrates multiple sensors, including Soil Moisture, Temperature and Humidity, Light Intensity, pH, Carbon Dioxide, and Air Quality sensors, to collect critical environmental and soil data. Additionally, it utilizes a weather API to gather localized weather information, enhancing the system's ability to predict and mitigate risks. The data is processed and visualized on an online dashboard, accessible through smart devices, enabling farmers to monitor conditions in real time. A key feature of the system is its ability to generate alerts based on predefined thresholds for sensor readings and weather conditions. These alerts help farmers take timely actions, such as adjusting irrigation schedules during extreme weather events or addressing soil nutrient deficiencies. The project draws upon knowledge areas such as IoT device communication, API integration, data preprocessing, cloud analytics, and user-centric dashboard design. By combining sensor data with weather insights, the system delivers recommendations that support sustainable resource management and improve crop productivity. The expected outcomes include a fully functional prototype capable of monitoring environmental conditions, providing real-time recommendations, and issuing alerts. This system aims to empower farmers with data-driven tools to enhance decision-making, reduce resource wastage, and increase agricultural

resilience against climate variability. Ultimately, it represents a step towards precision agriculture and sustainable farming practices in Pakistan.

1869. KICKS-VAULT

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

The KICKS-VAULT project is a blockchain-based platform designed to solve the growing issues of counterfeit sneakers, fraud, and inefficiency in the sneaker resale market. The project aims to ensure 100% authenticity of sneakers using a combination of Convolutional Neural Networks (CNN) for image-based authentication and blockchain technology to track the ownership and transaction history of sneakers. By using digital certificates as proof of ownership, the system provides transparency, security, and instant ownership transfer without needing physical shipment of sneakers. This platform revolutionizes the sneaker resale market, creating a safer, faster, and more reliable buying and selling process.

S25-BSCS

1870. FIND MY CHILD APP

Project Advisor	DR. ABBAS KHALID
Status	In Process of Completion

Find my child mobile and web application is designed to contribute to the improvement of the process of finding lost children with the use of superior technologies like the artificial intelligence (AI), real-time location tracking, and instant communication. This application overcomes the inadequacies in the old ways that are sometimes slow and lack real-time co-ordination. The app applies AI in image matching, includes live location sharing feature for child finders and parents, uploading of FIR reports for the case verification purpose and has chatbots for communication. Besides, it supports various languages and has a voice-to-text function so that it can be efficient for as many people as possible. Missing children is a serious problem affecting the families emotionally and socially and which usually adds a lot of burden to the law enforcers. The problem is solved through the use of such technologies as AI, mobile/web development, and real-time communication in this project. Some of the results that are expected include increased identification of children, better parental coordination with child finders and authorities, and better case management. The solution seeks to provide both technical assistance, alleviating families financially and emotionally, leading to safer and more efficient process of retrieving missing children's. The application ensures that certain information is conveyed in a rapid and secure rate, which improves time interventions. It gives confidence among the users and the authorities as real-time notification and reliable report are used. Its user interface which is friendly even becomes the source of access even while under stress mostly to parents. To say it in general terms, "Find My Child" is the symbol of an overall high-tech acceptance of the truly human problem.

1871. FOG-BASED VISIBILITY ENHANCEMENT SYSTEM

Project Advisor	DR. ADNAN GHAFOOR
Status	In Process of Completion

The Fog-Based Visibility Enhancement System aims to solve the problem of reduced visibility caused by fog, which makes it difficult for autonomous vehicles, driver assistance systems, and surveillance cameras to detect objects clearly. Under foggy conditions, traditional RGB (Red, Green, Blue) cameras often fail to capture clear images because fog causes light scattering, making objects appear blurry. On the other hand, infrared (IR) cameras can detect heat but provide less detailed visual information. To overcome these issues, this system combines both RGB and IR cameras. It uses advanced techniques to improve image clarity. One such technique, called Dark Channel Prior (DCP), removes haze from RGB images, making them clearer and easier to interpret. The system also uses Wavelet Transform to combine the RGB and IR images, preserving important details such as temperature (from the IR camera) and color/textured (from the RGB camera). Additionally, the system applies a method called CLAHE (Contrast Limited Adaptive Histogram Equalization) to enhance the image contrast, making objects in the fog stand out more clearly. It also uses edge detection to highlight the boundaries of objects, improving their visibility. The system processes these images in real-time using .NET libraries, allowing it to quickly enhance and display images as the conditions change. By improving the visibility of objects in foggy environments, this system helps enhance the safety and reliability of autonomous vehicles, driver assistance systems, and surveillance operations.

1872. TEAMIFY (COLLABORATIVE HR & TASK MANAGEMENT PORTAL)

Project Advisor	DR. ADNAN GHAFOOR
Status	In Process of Completion

Teamify is a modern, all-in-one HR and task management platform developed to streamline and centralize organizational operations through a unified digital interface. Rather than relying on multiple disjointed tools, Teamify consolidates essential HR functions—such as employee onboarding, biometric attendance tracking, leave and holiday management—alongside robust task management capabilities, including assignment tracking, task dependencies, timelines, and analytics dashboards. The platform is engineered using a technology stack comprising React.js for web frontend, React Native for cross-platform mobile support, Java Spring Boot for backend microservices, and AWS for scalable cloud infrastructure. This tech foundation ensures the system remains responsive, secure, and adaptable to future organizational growth and changing demands. With its modular architecture and user-centric design, Teamify offers seamless navigation, clear role-based access control, and customizable modules tailored to departmental workflows. Organizations benefit from improved transparency, real-time performance tracking, and detailed audit trails—leading to higher accountability and decision-making efficiency. Furthermore, by unifying HR and task operations under one roof, Teamify reduces operational overhead, minimizes the risk of data fragmentation, and boosts collaboration between teams. Its implementation ultimately contributes to elevated productivity, enhanced employee engagement, and stronger overall organizational performance.

1873. DISCOVERSEASE TRAVEL

Project Advisor	DR. ADNAN GHAFOOR
Status	In Process of Completion

DiscoverEase Travel fills the void for localized, user-focused travel sites for Pakistani travelers. Existing options tend to fall short in terms of affordability, transparency, and customization. Our site presents a full-fledged travel management platform with customized tour packages, virtual tours,

weather-based feedback, AI assistance, and multilingual support to make travel planning simple and informed.

1874. PIXEL-SAFE

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

Pixel-Safe is a hybrid digital forensic tool designed to detect tampered images by combining AI-driven Generative Adversarial Networks (GANs), traditional bit-level analysis, and invisible watermarking techniques. Besides detecting manipulation patterns using GANs and pixel-level inconsistencies (e.g., LSB modifications), the system also embeds a hidden watermark or modifies the least significant bits to track changes. Any tampering can be verified later by comparing the protected original with the suspicious image. Results are visualized via heatmaps and highlighted regions, aiding forensic analysts in verifying authenticity.

1875. A TORRENT CLIENT (NAMED MAGNETO)

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

1876. AI EPIDEMIC ALERT

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

AI Epidemic Alert is an AI-powered early warning system that predicts dengue, malaria, and influenza outbreaks using real-time data from weather APIs, healthcare records, and social media trends. It provides accurate risk assessments, real-time alerts, and a web dashboard for healthcare authorities. By leveraging machine learning and big data analytics, **AI Epidemic Alert** enables early intervention, resource optimization, and improved epidemic control, reducing the impact of infectious diseases.

1877. AI-BASED CUSTOM SHOE DESIGNER (SOLEGEND)

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

SoleGen is a smart, web-based platform that allows users to design their own custom shoes using artificial intelligence. It offers an easy and interactive way for people to personalize footwear according to their preferences, including color, material, shape, and style. The system provides AI-powered suggestions based on user input, making the design process simpler and more creative for all users, even those without any design experience. A real-time 3D visualization feature lets users see a realistic preview of their custom shoe as they make changes, helping them make informed design choices. Additionally, an optional foot scanning tool may be included to improve fitting accuracy by capturing foot dimensions using a phone camera or uploaded images. This project brings together technologies from artificial intelligence, machine learning, web development, and 3D rendering to create an innovative platform that connects user creativity with practical shoe production.

1878. GOTICKET

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

GoTicket is a mobile application designed to simplify ticketing for local tourist attractions, addressing the persistent challenges of long queues and inefficient manual processes. By offering a centralized, paperless solution for ticket purchasing, the project enhances user convenience and operational efficiency for businesses. The app integrates real-time updates, secure payment processing, and digital ticket generation, making it an indispensable tool for modernizing tourism.

Utilizing Feature-Driven Development (FDD), the project ensures iterative progress, continuous feedback, and scalability. Key knowledge areas include mobile app development, database management, and user experience design. The anticipated results include reduced waiting times, improved business operations, increased revenue, and actionable insights through data analytics. GoTicket promises to transform the ticketing process for local attractions, promoting sustainable tourism and delivering value to both visitors and businesses.

1879. SMART VIRTUAL ASSISTANT (SVA)

Project Advisor	DR. IRFAN ANJUM
Status	In Process of Completion

Smart Virtual Assistant (SVA) is a web-based AI platform developed to simplify and automate everyday activities, thereby enhancing productivity at an individual and organizational level. With high-end natural language processing (NLP), SVA interprets and communicates with the user in a human-like manner. Performing appointment scheduling, email filtering, data analysis, or report generation, SVA enhances and speeds up these tasks. One of the more notable strengths of SVA is its ability to automate repetitive tasks, for example, sending reminders or setting meetings, so that users can be relieved of their time and reduce the probability of human error. Another core aspect is security. The system uses encryption and multi-factor authentication to protect user data and keep it safe. What is unique, however, is SVA's ability to learn and improve over time. As users engage with the system, it learns of their preferences and requirements, providing a more personalized experience. Furthermore, it can work with several tools and platforms to provide a one-stop shop for task management and communication. This isn't an assistant created only for today; it's a scalable solution that adjusts to its users in line with the increasing volumes of work. SVA frees its users from mundane chores to spend more time on vital projects, whether indeed that pertains to scaling up business or just remaining organized. It is an intelligent, secure and trustworthy assistant that boosts efficiency and creativity in everyday life.

1880. SKILL SYNC

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Skill Nexus is an innovative web-based platform that reimagines the concept of learning and collaboration by enabling users to exchange skills without any monetary transactions. Traditional learning and outsourcing platforms like Coursera and Fiverr often involve financial barriers, making it difficult for individuals from diverse economic backgrounds to access opportunities for growth. Skill Nexus bridges this gap by establishing a barter-based ecosystem where users trade expertise in one domain to learn a new skill or seek assistance in another.

The platform incorporates advanced technologies including K-Nearest Neighbors (KNN) for skill matching, content-based dynamic recommendations, and automated scheduling systems to ensure a seamless user experience. Additionally, a point-based skill valuation framework and a reputation management system promote fairness and trust among users. Skill Nexus tailors the growth journey for every individual, encouraging continuous learning and collaboration.

Built using a tech stack comprising React.js, Node.js, MongoDB, and Python-based machine learning modules, the platform is scalable, mobile-responsive, and designed for

future expansion into mobile applications. By eliminating financial dependency and fostering skill-based exchanges, Skill Nexus aims to create an inclusive, collaborative, and self-sustaining skill-sharing community that empowers users to maximize their potential regardless of financial constraints.

1881. STROKEGUARD

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Brain stroke is one of the leading causes of death and long-term disability globally, with millions of people effected annually. A major contributor to stroke-related complications is the lack of real-time monitoring and early warning systems, which delays medical intervention.

The proposed project introduces a web application integrated with a wearable device that utilizes AI and machine learning algorithms to provide real-time stroke risk assessments and personalized health guidance. The platform includes an AI-powered chatbot where users can manually input their symptoms. The chatbot first determines whether the entered symptoms are stroke-related or not. If they are, it then engages the user with follow-up questions for a more detailed assessment. Based on the responses and the monitored vital data, the system calculates and displays a numeric probability score indicating the likelihood of a stroke occurring in the near future, along with preventive advice and recommendations for medical consultation.

The system has an automated monitoring system that continuously collects vital signs such as blood pressure, heart rate and other vitals by a connected wearable device and analyzes user reported symptoms to evaluate the risk of a stroke. This system is designed for both high-risk individuals and stroke survivors. A key feature of the system is its emergency alert, which instantly warns users when any vital sign exceeds a predefined safety threshold, enabling timely lifesaving action. It sends an emergency alert to user mobile as well as user care giver that tell them to take immediate action and also tell them about nearest available doctor. By automating the detection and response process, this intelligent system fills a critical gap in non-clinical healthcare monitoring, aiming to reduce stroke-related mortality and disability through early intervention, continuous awareness, and proactive health management.

1882. FUTURE SCHOLAR GUIDANCE SYSTEM

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

The Future Scholar Guidance System is an innovative platform designed to assist students in navigating their academic and career paths. It addresses the problem of students facing overwhelming choices and lack of personalized guidance in today's evolving educational landscape. By integrating advanced algorithms, data analytics, and conversational AI, it provides personalized recommendations for educational institutions, courses, and career opportunities. The system utilizes an interactive chatbot for real-time queries and an analytics dashboard for insights into trending fields and scholarship popularity. It aims to empower students to make informed decisions confidently, aligning their choices with market demand and emerging trends, ultimately leading to improved educational outcomes and career satisfaction.

1883. S1 & S2 HEART SIGNAL CLASSIFICATION USING DEEP LEARNING

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

This project aims to develop a comprehensive web-based system utilizing deep learning to accurately classify the first (S1) and second (S2) heart sounds from phonocardiogram (PCG) recordings. Heart sound classification plays a critical role in diagnosing cardiovascular issues, including valve defects, arrhythmias, and murmurs. By automating the analysis process, this system seeks to minimize human error and enhance diagnostic accuracy. The proposed tool will allow users to upload PCG recordings through an easy-to-use interface, generating detailed outputs such as visualizations, timestamps, and diagnostic interpretations. Advanced signal processing techniques and a hybrid deep learning model combining Convolutional Neural Networks (CNNs) and Long Short-Term Memory (LSTM) networks will be employed to ensure robust and real-time performance.

1884. PERSONALITY PREDICTION USING ML

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

The Personality Prediction project aims to support online hiring and recruitment by using machine learning and natural language processing (NLP) techniques to predict a person's personality based on their written text. In addition to analyzing text, the system will also detect seven basic human emotions Anger, Fear, Disgust, Joy, Sadness, Surprise, and Contempt by analyzing facial expressions through a webcam using computer vision techniques. The entire system will be presented through a user-friendly mobile application that includes features like signup, login, text input forms for personality-related questions, and live webcam video for capturing facial emotions. To build this system, we will need a large dataset containing labeled text data for personality traits and labeled face images for emotions. We plan to use Convolutional Neural Networks (CNNs) to extract features from facial images, which will then be used to train separate models for emotion and personality prediction. Additionally, we will create algorithms to process user inputs and extract useful information from both text and video. This project requires knowledge of data science, machine learning, computer vision, and it is important to ensure that all data is handled ethically and in compliance with privacy regulations.

1885. DEEFAKE IMAGE CLASSIFICATION USING TRANSFER LEARNING

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

The increasing sophistication of deepfake technologies has made image-based misinformation a critical threat to digital authenticity and trust. This project proposes a deepfake image classification system that combines the power of transfer learning with the efficiency of lightweight deployment. By utilizing pre-trained convolutional neural networks (CNNs) — Xception and MobileNet — the system performs binary classification of facial images (real vs. fake) while significantly reducing training time

and computational load. These models are fine-tuned using high-quality public datasets such as FaceForensics++ and Celeb-DF, which offer diverse and challenging manipulated images to ensure the model's robustness and generalization across real-world scenarios. Image preprocessing steps include resizing, normalization, and augmentation techniques to enhance training diversity and prevent overfitting. The model evaluation will incorporate key performance metrics such as accuracy, precision, recall, F1-score, confusion matrix, and ROC-AUC to provide a detailed assessment of classification performance. To maximize accessibility, the trained model is integrated into a responsive web interface using Streamlit, allowing end users to upload and analyze images in real time. The system also supports batch image processing, enabling efficient large-scale detection.

Technically, the project encompasses core areas such as deep learning with TensorFlow and Keras, image processing with OpenCV, data handling with NumPy and Pandas, and interactive web application development. The final deliverable is a functional, scalable, and user-friendly software tool that can serve practical needs in digital media forensics, journalism, cybersecurity, and legal investigations, offering an end-to-end solution for real-time deepfake detection.

1886. THE FORSAKEN FORT (A HORROR GAME)

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

The Forsaken Fort aims to address a significant gap in the horror game genre. This project combines cultural storytelling, advanced gameplay mechanics, and immersive design to create a unique horror experience based on Pakistani folklore.

- **Problem Description:**
 - Modern horror games often follow predictable patterns and neglect culturally rich narratives.
 - Lack of innovative gameplay that uses sound, environment, and player behavior dynamically.
- **Significance of the Problem:**
 - Many games in the genre fail to offer a unique or meaningful experience beyond jump scares or gore.
 - There is a significant underrepresentation of regional folklore and cultural narratives in the horror game industry.
 - Existing games do not integrate real-world interactions (like sound) into the core gameplay mechanics.
- **Objective:**
 - Create a horror game deeply rooted in Pakistani folklore, offering a fresh narrative and gameplay experience.
 - Implement AI-driven sound detection that reacts to real-world noise levels, creating a dynamic and immersive atmosphere.
 - Develop multiplayer and single-player modes where players uncover the village's dark history while surviving against supernatural threats.
- **Gameplay Features:**
 - **Setting:** A haunted village and a cursed fort, steeped in supernatural entities drawn from Pakistani folklore.
 - **Core Gameplay:**
 - Exploration, puzzle-solving, and survival.
 - Avoidance of AI-controlled entities that react to sound (e.g., player noise detected via microphone).

- A multiplayer mode for up to four players offering cooperative survival mechanics.
- **Sound Detection Mechanic:**
 - Real-time microphone integration that makes in-game entities react to the player's real-world noise (e.g., speaking, moving).
 - The AI entities are drawn to or repelled by noise, adding a strategic layer to gameplay.
- **Knowledge Areas to be Utilized:**
 - **Game Development:** Unity (C#), asset integration, and scene design.
 - **Artificial Intelligence:** Dynamic behavior of in-game entities based on sound detection and player actions.
 - **Networking:** Real-time multiplayer features, synchronization, and cooperative gameplay.
 - **Audio Processing:** Real-world sound integration and the impact of noise on gameplay mechanics.
 - **Cultural Storytelling:** Incorporating regional folklore and supernatural creatures from Pakistani myths.
- **Expected Results:**
 - **Playable Prototype:** Demonstration of the core gameplay mechanics, including sound-driven AI behavior and multiplayer capabilities.

Documentation: A comprehensive technical report detailing design decisions, implementation of sound detection, and AI-driven mechanics.

1887. AI-DRIVEN REAL ESTATE VOICE BOT

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

The real estate industry often suffers from inefficiencies in handling large volumes of client communication, especially when it comes to cold calling, qualifying leads, and scheduling appointments. These repetitive and time-consuming tasks reduce productivity and result in missed opportunities. This project aims to address these challenges by developing an AI-powered voice bot capable of managing outbound calls for real estate professionals. The bot will use Large Language Models (LLMs) for natural and dynamic conversations, along with speech recognition and text-to-speech (TTS) technologies to enable smooth verbal interaction with clients. The project combines concepts from artificial intelligence, machine learning, speech processing, and web development. The expected outcome is a fully functional and scalable solution that enhances lead conversion rates, reduces manual workload, and significantly boosts operational efficiency in the real estate sector.

1888. DYNAMIC SKILL MATCHING AND LEARNING ENHANCEMENT PORTAL

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

The **Dynamic Skill Matching and Learning Enhancement Portal (DSM Portal)** is an AI-driven platform designed to bridge the gap between traditional education and the evolving demands of the global job market. By utilizing cutting-edge technologies such as machine learning, artificial intelligence, and **real-time data analytics**, the platform offers a highly personalized approach to skill development and career advancement. It

dynamically assesses **user profiles**, including **current skills, interests, and career goals**, to generate adaptive learning recommendations and personalized career opportunities. The portal includes features like coding challenges, peer reviews, mentorship, and interactive learning tools, ensuring continuous user engagement. Real-time data analytics dashboards track progress and career readiness, providing actionable insights. For employers, the portal offers access to a pool of skilled, verified candidates, aligned with industry demands. This project represents a comprehensive and scalable solution, aimed at empowering individuals to achieve their career goals. While addressing the critical skills gap in the workforce.

1889. TALENTHUB PRO

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

TalentHub Pro is an AI-powered recruitment platform designed to streamline the hiring process by automating key tasks such as candidate filtering, CV generation, and interview preparation. The system intelligently collects and processes candidate data—experience, availability, skills, and salary expectations—to match job seekers with employer requirements in real time.

The platform leverages Artificial Intelligence (AI) and Natural Language Processing (NLP) to provide smart features including a chatbot for interactive communication, personalized skill development suggestions, and dynamic interview question generation based on job descriptions and company profiles.

TalentHub Pro offers a secure, scalable web application aimed at reducing manual workload for recruiters while empowering candidates with better visibility and growth recommendations. By bringing together intelligent automation and user-centric design, it provides a complete solution to modern hiring challenges.

1890. BORROW HUB

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

Borrow HUB is a mobile application designed to bridge the gap between individuals who want to rent out their underutilized items or offer services and those who need them temporarily. The platform facilitates secure transactions, enhances trust through user reviews and admin verification, and ensures a seamless rental experience. A key feature of Borrow HUB is the implementation of a mandatory 60% advance payment from customers to secure bookings, ensuring reliability and commitment from both parties. The project leverages technologies such as Android Studio (Java/XML) for frontend development and MySQL for backend data management. By promoting a shared economy, Borrow HUB offers an affordable alternative to purchasing expensive items for short-term use while generating income opportunities for providers.

1891. DRESSIFY: A BUDGET FRIENDLY CLOTHING AGGREGATOR

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

Dressify is a budget-friendly web application designed to revolutionize online clothing shopping in Pakistan. It aggregates clothes from multiple local brands into a single platform using a centralized crawler and multiple scrapers. Users can search for products based on price, style, and material, or use an AI-powered image-based search to find similar styles. It incorporates a chatbot powered by a freely available LLM API for personalized shopping assistance, along with smart badges and wishlist features, ensuring that users can save their favorite items and view badges on products that are on sale or have price reductions. This makes it easier to track desired products and enhances the overall user experience. The project addresses issues such as time-consuming browsing, missed sales, and lack of visibility for local brands by utilizing technologies like React.js, Node.js, Google Vision API, and MongoDB. Dressify bridges the gap between tech-savvy users and local fashion by offering a scalable, interactive, and user-centric solution.

1892. GLOBEASSIST

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

1893. CAREHUB: UNIFIED PATIENT-CENTRIC PORTAL AND HOSPITAL OPERATIONS HUB

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

In the current, swiftly changing healthcare environment, there is an increasing demand for centralized and sophisticated digital solutions that improve administrative efficiency and patient care. Our suggested initiative, "Hospital Management and Patient Portal System," fulfills this requirement by integrating hospital operations with a patient-centric portal. The solution enables hospitals to register on the network and conduct internal verification of doctors. Patients are able to upload, store, and manage their diagnostic findings, including MRIs, CT scans, and blood tests, within a protected environment. The patient portal's primary attribute is its dual suggestion mechanism. The Medicine Recommendation System proposes alternative medications with identical active components and offers a pricing comparison. The Hospital Recommendation System utilizes geolocation to suggest only local hospitals that are registered on our platform, guaranteeing reliable and validated choices. Physicians may request access to a patient's records, and subsequent to OTP authentication by the patient, they are permitted to see the information and upload prescriptions. This guarantees secure and consent-driven data exchange. The technology enables patients to manage their health information while streamlining hospital processes. The objective is to enhance healthcare accessibility, transparency, and decision-making via a contemporary, secure, and scalable system.

1894. THEFOOD LOOP MOTTO: FROM SURPLUS TO SUSTENANCE

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

THE FOOD LOOP project addresses the critical global issue of food waste by developing an AI-driven platform that optimizes surplus food management through real-time tracking, quality assurance, and redistribution. The platform integrates barcode/QR-based inventory management with AI-powered predictive analytics to alert users about expiring items, suggesting actionable solutions like dynamic discounts, donations, or recipes. A key innovation is the image recognition-based food quality assessment system, which evaluates surplus food safety before listing it on the dynamic marketplace. The platform connects businesses, individuals, and charities via a user-friendly mobile and web application (built with Flutter and Firebase), facilitating seamless transactions and logistics. Additionally, AI-driven pricing strategies maximize profitability for sellers, while vendor/donor rating systems ensure trust and transparency.

1895. FLUENT FLOW: CHINESE HUB

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

Fluent Flow: Chinese Hub is a web language learning platform that aims to improve the Chinese language learning process by using Artificial Intelligence (AI), Augmented Reality (AR) and gamification approach. Its AI-powered chatbot helps users practice Chinese language in real time and provide instant feedback on pronunciation and grammar. Also, an AR module enhances vocabulary learning by allowing users to interact with real-world objects and receive contextual translations.

In order to ensure engagement and motivation of the users, the platform offers gamification options such as leaderboards, progress streaks and achievement rewards. The lessons will be personalized on the basis of user's performance for an adaptive learning experience tailored to the needs of each individual learner. Real-time analytics and user progress tracking are provided to offer detailed feedback as part of an overall training session to help learners see their progress and to make desired modifications.

Fluent Flow's goal is to offer the opportunity for learners of languages to enter an immersive, interactive and adaptive environment as opposed to static learning methods. Our product will be an alternative to traditional passive language learning and a valuable tool both for individual learners as well as for educational institutions. Using AI driven feedback, AR based word acquisition and gamified learning modules, we hope to boost user engagement, retention and overall language proficiency.

1896. HEARMATE: AI-BASED INTERACTIVE PROGRESSIVE WEB APPLICATION FOR CHILDREN WITH AUDITORY DISORDER (APD)

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

HearMate is an AI-powered Progressive Web Application (PWA) thoughtfully designed to support children diagnosed with Auditory Processing Disorder (**APD**). These children frequently struggle to follow spoken directions, identify sounds, and comprehend speech in noisy settings, which has an impact on their social and scholastic development. By

offering a customized and entertaining digital platform that adjusts to each child's particular auditory demands, **HearMate** seeks to close this gap.

A variety of AI-powered modules are available in the app, such as interactive sound identification exercises, real-time speech-to-text translation, and adaptive learning activities that change according to the child's success. In order to keep the youngster engaged and motivated, gamification components are carefully incorporated into the experience, transforming what could otherwise feel like therapy into enjoyable, fulfilling sessions.

HearMate emphasis on pragmatism and inclusivity is what really makes it stand out. Because the platform is available offline, learning may proceed without being restricted by internet usage. Additionally, it provides easy-to-use dashboards that let instructors and parents monitor student development, pinpoint areas of strength and weakness, and modify assistance plans as necessary.

HearMate wants to be more than simply a tool by fusing cutting-edge AI technology with children-centered design. It wants to become a daily companion for children with **APD**, making their path to improved auditory understanding fun, efficient, and powerful.

1897. INTELLIGENT PROJECT MANAGEMENT AND CONTROL USING JIRA

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

The project involves creating an intelligent system to monitor and manage project progress with Jira. With the mapping of the project plan into Jira, the system will automatically generate tickets, release management, and give a better view of the project to the senior management. The aim is to enhance the tracking of the project, validate alignment between the requirements and the project plans, and give a view of the project-health.

1898. AUTOMATA VISUALIZATION: BRIDGING THEORY AND PRACTICE

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

With a particular focus on Deterministic Finite Automata (DFA), this initiative seeks to close the gap between theoretical knowledge and real-world application in the fields of formal languages and automata theory. Although they offer a basis for automata visualization and simulation, current tools such as JFLAP are devoid of sophisticated features like intelligent analysis, customization, and modern graphical capabilities.

Our research suggests extending JFLAP to address this issue by adding additional features such enhanced graphical visualization, and interaction with machine learning methods to study automata behavior. The main goals are to help researchers and educators by providing better insights on automata behavior through AI-driven ideas and to make learning more intuitive for students.

Requirement analysis, literature study, JFLAP architectural analysis, and system design were our main priorities in Phase 1. In order to confirm important ideas and depict automata in an interactive manner, a simple prototype was also planned. The project is developed using Python and integrates scikit-learn or TensorFlow for AI integration, as well as visualization tools like NetworkX and Graphviz. When finished, the tool should

function as a cutting-edge analytical and instructional platform for automata research and learning.

1899. PROLABOUR: SMART JOB MATCHING PLATFORM FOR SKILLED LABORERS

Project Advisor	MR. ASIM RAZA
Status	In Process of Completion

Hiring qualified workers is often difficult, particularly in places such as Pakistan, where current platforms restrict worker sign-ups and keep salary standards inflexible. To tackle existing problems, ProLabour designs a platform that promotes openness, flexibility, and fairness in job matching. By using ProLabour, electricians, plumbers, carpenters, as well as other skilled workers, are able to register without barriers and receive pay according to each job they complete, instead of receiving a set salary. Real-time messaging on ProLabour ensures laborers connect straight with customers, resulting in better and more transparent communication. Geolocation services for discovering local openings and a rating mechanism to recognize reliability are among its features. By harnessing current technological developments, ProLabour seeks to reduce current labor-market gaps and provide a platform that helps workers maintain employment and gives customers more choices from qualified professionals.

1900. FREELANCESYNC

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

FreelanceSync is an AI-powered platform that revolutionizes freelance collaboration by enabling efficient and intelligent matchmaking between freelancers based on skills, budget, deadlines, and project requirements. Unlike traditional freelancing platforms that focus primarily on client-to-freelancer connections, FreelanceSync introduces AI-driven team matchmaking, real-time communication tools, and a fully integrated project management dashboard. It offers a secure payment system with **escrow-based** handling, mobile access, and premium collaboration features. This end-to-end solution addresses key challenges like trust, coordination, and productivity for freelancers, enabling seamless teamwork and scalable opportunities for growth. The project leverages modern tech stacks and cloud platforms to ensure performance, security, and ease of use.

1901. ECZEMA CARE

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

Eczema Care is a cross-platform app that helps users manage eczema by tracking symptoms, treatments, and triggers. It uses machine learning (CNN with TensorFlow) to predict flare-ups and provide personalized care tips. Built with React Native and React.js, and backed by Firebase, the app offers real-time data sync and easy access on both mobile and web. The project combines AI, cloud services, and software development to create a smart self-care tool aimed at improving quality of life for eczema patients.

1902. SAMAAT: HEARING AID GLASSES

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

This project presents a custom-built wearable assistive device known as SAMAAT: HEARING AID GLASSES for the Deaf, aimed at enhancing the communication capabilities of individuals with hearing impairments. The primary problem addressed is the difficulty deaf individuals face in understanding spoken communication and environmental sounds in real-time. The system consists of a mobile application that captures ambient audio using the smartphone's microphone, converts the speech to text using speech recognition technology, and transmits both the subtitle text and synthesized voice to ESP32-based smart glasses via Bluetooth.

These smart glasses, embedded with an OLED display and a speaker, display the converted text as subtitles and play synchronized voice output to support situational awareness. The project utilizes knowledge in embedded systems, Android development, speech processing, and wireless communication. The expected outcome is a reliable, real-time subtitle and voice playback system that enhances the user's social interaction and independence in daily life scenarios.

1903. THREADS OF TIME

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

Threads of Time is a third-person action-adventure game for PC developed using Unity. The game allows players to explore and play across three different time periods: the 15th century, the 21st century, and the 30th century. Each timeline features unique environments, combat styles, and gameplay mechanics. The game combines sword fighting, modern weapons, and futuristic tech-based combat along with puzzle-solving and exploration. Players will experience different types of missions and challenges depending on the timeline they are in. The game includes a time-travel mechanic and meaningful choices that affect the ending, giving it replayability and player-driven outcomes.

1904. VIRTUAL TRY-ON SHOPPING PLATFORM

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

This project is about creating a smart and modern online shopping platform where people can try on clothes virtually. The goal is to make online clothes shopping easier, more fun, and more accurate by using 3D technology.

When a person visits the website, they can choose from four model sizes Small, Medium, Large, and Extra Large. These models help show how clothes will look on different body types. Instead of just looking at pictures of clothes, users can see how the clothes fit on a 3D model that looks more like them. This helps them understand if something will fit well or look good before they buy it.

Another important part of the platform is the AI-powered chatbot. This chatbot is like a smart helper. It talks to users, answers their questions, and gives suggestions. For example, if someone is looking for a dress for a wedding or a casual t-shirt, the chatbot

can recommend items that match their style, size, and preferences. It works 24/7 and gives a more personal shopping experience, just like a salesperson in a store.

This system can solve common online shopping problems. Many people return clothes because they don't fit or look different from what they expected. With virtual try-on and smart suggestions, shoppers are more confident in their choices. This reduces the number of returns, saving time and money for both the customer and the company.

In short, this platform combines technology and fashion to create a better way to shop online. It gives people the comfort of shopping from home while offering an experience similar to trying on clothes in a real store. It makes shopping more interactive, personalized, and enjoyable.

1905. THE AI RENTAL HUB

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

In an increasingly resource-conscious world, access often outweighs ownership. The AI Rental Hub is an innovative, web-based, peer-to-peer rental platform that leverages artificial intelligence to optimize the sharing and utilization of everyday items such as electronics, tools, and books. The platform addresses a growing societal and economic need: enabling users to affordably and securely rent items they need for a limited time, while helping owners monetize underutilized assets.

Unlike traditional item rental platforms, The AI Rental Hub integrates intelligent algorithms that evaluate multiple listings of the same product and recommend the most suitable option for the renter. This decision is based on a combination of user preferences, item ratings, reviews, location, availability, and previous rental behavior. The inclusion of a dynamic bidding system further enhances affordability by allowing users to place competitive offers, creating a flexible pricing environment that benefits both renters and item owners.

Security and trust are key pillars of the platform. To ensure the authenticity of users and prevent fraudulent activity, The AI Rental Hub employs a multi-step user verification system, including identity validation, transaction logging, and rating-based credibility scoring. The platform architecture is built using modern technologies: React.js for frontend development, Django or Node.js for backend services, PostgreSQL for data management, and TensorFlow or PyTorch for implementing AI models.

The project aims not only to provide a scalable and intelligent rental ecosystem but also to promote sustainability through resource sharing. By minimizing unnecessary purchases and encouraging reuse, the platform contributes to a circular economy model. From a technical standpoint, the project challenges include AI model training, seamless frontend-backend integration, scalable deployment, and end-to-end system security.

Upon completion, The AI Rental Hub will be a fully functional, cloud-hosted rental platform that showcases AI-driven decision-making, secure user interaction, and real-time bidding. It reflects a synthesis of software engineering, machine learning, and digital trust frameworks, offering a valuable solution for consumers and item owners alike while also contributing to broader environmental and economic goals.

1906. EV CHARGING BOOTH RESERVATION APP WITH AI INTEGRATION

Project Advisor	MR. ENGR. SAJID SALEEM
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Status	In Process of Completion
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The increasing adoption of electric vehicles (EVs) has placed significant pressure on the existing charging infrastructure, especially in urban areas where the availability of charging booths is often limited. One of the most common complaints by EV owners is the unpredictability and long waiting times at charging stations, which causes frustration, delays, and inefficiencies in their daily commutes. The “EV Charging Booth Reservation App with AI Integration” aims to address these issues by creating a mobile application that integrates artificial intelligence (AI), real-time booth availability tracking, and geolocation-based services to provide a seamless and user-friendly charging experience.

This project proposes an intelligent reservation system where users can pre-book EV charging booths and avoid unnecessary delays. AI components in the application will analyze historical usage patterns and battery levels to suggest optimal charging times and stations. Furthermore, geolocation APIs will allow users to view the nearest stations and navigate there conveniently. The app will interact with third-party APIs to fetch real-time booth availability data and ensure accurate recommendations. By offering a personalized, predictive, and efficient solution, this application contributes to sustainable transportation and improved resource utilization. The end product will be a scalable and cross-platform mobile application supported by a robust backend architecture.

1907. AUDIOSCOPE: ADVANCED SPEECH ISOLATION AND ENHANCEMENT WITH PRIVACY FIRST ML

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

AudioScope is a system designed for advanced speech isolation and enhancement. It addresses the problem of unclear audio in noisy environments by using machine learning to isolate speech from unwanted background noise. The system enhances audio quality in various situations, including noisy public spaces and virtual meetings, while prioritizing user privacy. Key technologies used include Jupyter Notebook, Visual Studio Code, Figma, Postman, and Docker. The expected outcome is a clearer and more intelligible voice experience across different audio needs.

1908. AI-POWERED PRODUCE HEALTH GUIDE AND PLANNER

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

In today's fast-paced world, consumers often struggle with identifying the freshness of fruits and vegetables and lack awareness of their nutritional benefits. This leads to unnecessary food waste and missed opportunities for healthier eating. Our project aims to address these issues through a mobile application that leverages artificial intelligence and deep learning technologies. The app will enable users to assess the freshness of produce by analyzing images using computer vision techniques and provide personalized health guidance based on the nutritional content of fruits and vegetables. We focused on problem identification, requirement gathering, and system design. We reviewed existing solutions and identified gaps such as the absence of AI-based

freshness detection and the lack of personalized dietary planning in current apps. Our proposed system includes features like AI-powered image-based freshness scoring, a smart chatbot for health tips, nutritional facts display, daily reminders, gamified habit tracking, and storage advice.

1909. NICHE CONNECT: EMPOWERING PHOTOGRAPHERS, INFLUENCERS, AND MARKETERS IN PAKISTAN

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The creative industry in Pakistan, particularly photographers, influencers, and marketers, faces significant challenges in securing opportunities, gaining visibility, and collaborating efficiently. Existing freelancing platforms such as Upwork and Fiverr cater to a broad audience but fail to address the specific needs of these professionals. Due to the lack of a dedicated platform, many creative professionals struggle with undervaluation, scattered job opportunities, and inefficient workflow management.

To address these issues, **Niche Connect** is designed as a specialized freelancing platform tailored to the needs of photographers, influencers, and marketers in Pakistan. The platform will provide essential features such as **portfolio management, booking and scheduling systems, secure bank transfer-based payments, and AI-powered job matching** to enhance user experience and streamline professional networking.

Developed using **React.js, Tailwind CSS (frontend), Node.js (backend), and MongoDB (database)**, Niche Connect will offer a scalable and user-friendly interface. The platform will integrate social media for enhanced credibility and verification while ensuring seamless collaboration through built-in communication tools. By bridging the existing gap in the market, Niche Connect aims to empower creative professionals, enabling them to thrive in a more structured and opportunity-driven ecosystem.

1910. NEXTGEN SMART CODE EDITOR

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

The **NextGen Smart Code Editor** addresses the common problem of switching between multiple tools for coding, collaboration, machine learning, and data visualization. It combines all these features into a single, user-friendly web platform. The project is significant as it simplifies the workflow for developers and data scientists, offering AI-powered coding help, real-time collaboration, ML model support, and interactive visualizations. It draws on knowledge areas such as Python programming, machine learning, data analysis, and web development. The expected outcome is a secure, efficient tool that enhances productivity and learning in coding and data science environments.

1911. ECO-IMPACT AI: COMPREHENSIVE CLIMATE POLICY IMPACT SIMULATOR

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

Eco-Impact AI is an interdisciplinary project focused on developing an AI-powered simulation platform that models the environmental and economic impacts of climate change management policies. This project addresses a critical global challenge: the lack of accessible, comprehensive, and data-driven tools to assist in climate policy design, particularly in developing countries where such tools are often too technical, costly, or limited in scope. Policymakers frequently face challenges in evaluating the trade-offs between environmental goals (e.g., reducing greenhouse gases) and economic stability (e.g., GDP growth, employment), often leading to uncertainty or inaction.

This project aims to bridge this gap by delivering a Minimum Viable Product (MVP) centered on CO₂ emissions—the primary contributor to global warming. The system will simulate the effects of various policy strategies, such as carbon pricing, industrial emission caps, and afforestation, utilizing a range of machine learning models under consideration, including Random Forest, XGBoost, ARIMA, and LSTM. These models will be trained on data from trusted sources like the World Bank, Kaggle, EDGAR, IEA, and others.

A user-friendly web interface, developed using React.js and Flask, will allow users to define and adjust policy parameters, triggering simulations accompanied by dynamic visualizations. Outputs will include projections for CO₂ reduction, changes in air quality, economic indicators (such as GDP and employment), and policy effectiveness over time. The platform's key features will include scenario comparison, timeframe analysis, and the ability to download reports—making it accessible to non-technical users such as policymakers, NGOs, educators, and researchers.

Integrating knowledge from machine learning, time-series forecasting, web development, environmental science, and economics, Eco-Impact AI is designed with scalability in mind. It has the potential to expand into additional climate dimensions, such as methane emissions and biodiversity metrics. The final deliverable will be a comprehensive, open-source decision-support tool that fosters data-informed, sustainable, and equitable climate action.

1912. AUGMENTED REALITY FURNITURE VISUALIZATION MOBILE APPLICATION USING FLUTTER AND UNITY

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

1913. FROGGY AI: AI POWERED MULTI-FUNCTIONAL PLATFORM

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

Froggy AI is a cutting-edge AI-powered platform designed to simplify everyday tasks through an integrated approach to document interaction, media generation, and information extraction.

The project addresses the fragmented nature of current AI tools by combining six essential functionalities PDF document interaction, sound generation, image generation,

video generation, OCR capabilities into a single, user-friendly platform. By leveraging advanced AI models like OpenAI and Gemini, alongside modern development tools such as Next.js, Prisma ORM, and PostgreSQL, Froggy AI delivers a robust solution that is both powerful and accessible. The platform's unique value proposition lies in its free availability, making advanced AI capabilities accessible to users of all backgrounds. This comprehensive solution aims to significantly reduce time spent on manual data processing, content creation, and meeting documentation, while ensuring high accuracy and quality results across all modules.

1914. BLOODCARE: AN AI-POWERED ONLINE BLOOD BANK SYSTEM

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

In today's world, technology is playing a major role in improving healthcare systems. Quick and safe access to blood during emergencies can save countless lives, but current blood donation systems often lack speed and efficiency. There is a growing need for a smart, reliable solution that can bridge the gap between donors and recipients. BloodCare is an AI-powered online blood bank system created to solve the major problems in traditional blood donation methods. These problems include outdated donor records, slow communication, and the lack of real-time tracking, which can lead to dangerous delays in emergency cases. The project addresses the urgent need for a smarter system that can quickly match donors with recipients, ensure blood compatibility, and provide timely alerts. By automating the process and using location tracking, the system improves the chances of saving lives during critical moments. The final product will be a complete blood donation management system that includes features like donor location tracking, cross-matching analysis, and automated notifications. The goal is not just to build a digital solution, but to create a reliable and life-saving platform that makes blood donation safer, faster, and more accessible.

1915. FEMDRIVE

Project Advisor	MR. IMRAN AHMAD
Status	In Process of Completion

FemDrive is a mobile application designed to offer women a safe, eco-friendly, and affordable mode of transportation through electric scooters and bikes. The project aims to address critical urban mobility challenges faced by women, particularly concerning safety and accessibility. By transitioning from a web prototype to a feature-rich mobile platform, FemDrive integrates functionalities such as real-time GPS tracking, emergency alerts, secure payment processing, and user-friendly ride booking. The solution not only promotes environmental sustainability but also empowers women with greater independence in their daily commute. This Software Requirements Specification (SRS) defines the scope, functionality, and constraints of the system, highlighting its alignment with both technical goals and societal impact. FemDrive sets out to combine technological innovation with social purpose, delivering a reliable transportation alternative tailored for women.

1916. FARMGENIE

Project Advisor	MR. IRFAN LATIF
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Status	In Process of Completion
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FarmGenie is a comprehensive, AI-powered web platform designed to revolutionize the agricultural sector by integrating smart farming tools, digital marketplaces, and efficient land leasing solutions. The platform addresses the critical challenges faced by farmers, equipment providers, and landowners, including fragmented resources, inefficient operations, and lack of market transparency. FarmGenie provides a unified digital ecosystem that includes AI-powered recommendations, chatbot support, and real-time equipment tracking, all aimed at enhancing productivity and decision-making.

By leveraging cutting-edge technologies like machine learning, cloud computing, and advanced data analytics, FarmGenie empowers users to optimize their agricultural operations, reduce operational costs, and increase profitability. The platform's scalable architecture ensures seamless integration with third-party APIs, while its robust security framework guarantees data protection and privacy. FarmGenie is designed to bridge the technological gap in agriculture, promoting sustainable farming practices and supporting long-term industry growth.

1917. PREPSPHERE AI (A UNIFIED PLATFORM FOR COMPETITIVE EXAMS PREPARATION)

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

Prepsphere AI is an AI-powered, unified platform designed to transform the landscape of competitive exam preparation in Pakistan, specifically targeting exams such as CSS, PPSC, and FPSC. It addresses major pain points like fragmented study materials, the absence of personalized guidance, and outdated, inefficient preparation methods. In contrast to traditional learning systems that often rely on expensive academies and poorly organized resources, Prepsphere AI offers a smart, affordable, and centralized solution by harnessing the power of modern AI technologies. At its core, the platform is powered by Fine-tuned Large Language Models (LLMs)—advanced neural networks trained on extensive text data—enhanced with components like Retrieval-Augmented Generation (RAG), a Natural Language Processing (NLP) pipeline, and Optical Character Recognition (OCR). Prepsphere's RAG system retrieves relevant content from a searchable database created by OCR-scanned textbooks and past papers, allowing it to generate accurate, exam-specific responses. NLP further refines user queries, summarizes learning material, and adapts content delivery to each learner's needs. These technologies come together in a mobile-first, scalable solution that includes intelligent features such as book-based AI chat support for instant answers, personalized video recommendations, AI-generated mock tests with adaptive difficulty, a structured past paper question bank, and real-time analytics for progress tracking. Built on robust cloud infrastructure like Firebase and Google Cloud, Prepsphere AI ensures accessibility, personalization, and efficiency—democratizing exam preparation so that every student can study smarter, regardless of financial or geographical constraints.

1918. PARENTPAL

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

New parents often struggle with tracking infant milestones, identifying health concerns, and managing emergencies. Existing parenting apps lack AI-driven health monitoring, real-time expert consultations, and structured emergency support, leading to uncertainty and delays in care. ParentPal is an AI-powered mobile application that integrates symptom analysis, milestone tracking, and expert consultations to provide parents with real-time guidance. The app leverages machine learning (TensorFlow, PyTorch), mobile development (React Native, Node.js), and secure cloud storage (MongoDB, PostgreSQL) to deliver a seamless and reliable experience. Expected outcomes include early detection of health issues, reduced parental anxiety, and improved access to expert guidance, fostering a more informed and connected parenting community. ParentPal aims to revolutionize infant care through technology-driven, accessible, and data-driven solutions.

1919. AI MIRAGE ARCHITECT

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

AI Mirage Architect is an AI-powered platform designed to assist in the early-phase architectural design process using natural language prompts. This system enables designers and clients to quickly generate visual layout concepts based on descriptive inputs. By integrating generative AI technologies, the system reduces time spent on conceptual drafts and enhances creative flexibility. The platform emphasizes usability, performance, and real-time interaction, empowering professionals with innovative assistance for architectural planning.

1920. EXAM GENERATOR WITH MULTI-LANGUAGE SUPPORT AND PLO/CLO MAPPING

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

EvalBotX is a web-based platform aimed at transforming the way educational institutions in Pakistan generate their examination papers. It simplifies and automates the entire exam generation process by incorporating the HEC-mandated CLO (Course Learning Outcomes) and PLO (Program Learning Outcomes) mapping system. With a growing emphasis on Outcome-Based Education (OBE), EvalBotX ensures that all assessments are directly aligned with institutional learning goals. The platform integrates a question bank where each question is tagged with metadata including its associated CLO/PLO, difficulty level, and marks. Using this data, EvalBotX can automatically generate balanced exam papers in real time. These papers are designed to meet various academic needs such as varying difficulty levels and distribution of marks while ensuring full compliance with HEC standards. The system features a user-friendly interface developed in React.js and a robust backend built on Django, ensuring performance, usability, and academic precision.

1921. FYP COMPASS: PROJECT MANAGEMENT SYSTEM

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

FYP Compass is a web based platform aimed at optimizing and improving the process of final year projects (FYP) for students, consultants and administrators. Traditional FYP workflows are often confused and lack a central system for effective communication, progress tracking and assessment. The project addresses these challenges by introducing digital solutions that allow students to interact easily with consultants, submit assigned tasks, and pursue project milestones. The system includes ticket based task management capabilities, consultant availability plans, and intelligent chatbots that allow users to search for previous FYP projects and receive automatic answers to common queries. This includes a variety of knowledge areas, including software engineering principles, database management, artificial intelligence (for chatbots), and web development technology. Expected results include increased student satisfaction, timely reviews and increased transparency on FYP travel. FYP Compass aims to serve as a scalable model that can be used by universities to modernize and digitize FYP management systems.

1922. WANDER HUB AI

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

WanderHubAI is a smart, AI-powered travel planning platform built to enhance the travel experience **within Pakistan** for both local citizens and international visitors. It simplifies the often fragmented process of organizing trips by offering a unified solution powered by **Natural Language Processing (NLP)** and **Deep Learning**. The system generates personalized itineraries based on user preferences, interests, and budget, making it easy for travelers to explore Pakistan's mountains, beaches, cities, and cultural landmarks.

To make planning more interactive and accessible, WanderHubAI integrates a real-time **chatboard system**, allowing users to communicate with support agents or local travel guides for personalized recommendations, help, and suggestions. Features like **voice command support, smart budgeting tools, multilingual access, and Hajj & Umrah planning modules** add further value to the platform. By combining AI with user interaction, WanderHubAI offers a seamless and intelligent travel companion for discovering the beauty and diversity of Pakistan.

1923. AI BASED DESTINATION EXPLORER

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

AI Generated Destination Explorer is a smart web-based travel planner that uses artificial intelligence to create personalized travel packages based on user preferences like budget, stay duration, and destination. This platform replaces the traditional, non-personalized travel agency system with a real-time, culturally inclusive AI chatbot assistant. The system supports live location sharing, real-time weather, halal food locators, prayer time notifications, and more, catering especially to Muslim travelers. Built using modern technologies, this app transforms travel planning into a smooth, efficient, and inclusive experience.

1924. WEAR FUSION: AI-POWERED CLOTHING CUSTOMIZATION AND AR SHOPPING

Project Advisor	MR. JAWAD HASSAN
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Status	In Process of Completion
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The fashion industry in Pakistan is growing, but local designers and small businesses struggle to gain visibility and reach a wider audience. Customers often face difficulty finding personalized clothing, as ready-made options are mass-produced and lack customization. While some global platforms offer custom clothing, high costs and limited access to local tailors make them impractical. Additionally, there is a rising demand for sustainable fashion, but few platforms offer eco-friendly options. These challenges create an opportunity to build a platform that connects customers with local tailors and designers, provides personalized fashion, and supports sustainable practices, helping small businesses thrive.

1925. ONLINE RENTAL PLATFORM

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

The Online Property Rental System is a web-based platform that connects renters and customers, facilitating the rental of various items such as vehicles, wedding dresses, tools, and event equipment. The system ensures secure transactions through EasyPaisa, JazzCash, and bank transfers, and incorporates features like real-time booking, user reviews, and messaging. The platform aims to improve accessibility, efficiency, and trust in the rental market in Pakistan.

1926. AUTOMATED TRIAL LOG

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

The Automated Trial Log is a system designed to record and transcribe courtroom hearings in real time using speech-to-text and audio processing. It assists stenographers by reducing manual effort, improving accuracy, and minimizing human error. The system features a web platform for audio recording, live transcription, editing, and PDF export. A mobile app allows judges and authorized personnel to easily access transcripts. Unclear or misheard parts are flagged for quick review, making legal transcription faster, easier, and more reliable.

1927. BUY VAULT HUB

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

In Pakistan, the B2C market is fragmented across multiple platforms, making it difficult for users to efficiently find, compare, and buy products. Consumers are required to visit different websites or apps, leading to inefficiencies and a frustrating experience. At the same time, small businesses face challenges in gaining visibility. This project aims to solve these problems by developing a unified platform that aggregates products from various sources, including local marketplaces and social media, into one easy-to-use application. The platform simplifies the process of discovering, comparing, and acquiring products, providing users with a more convenient and time-saving experience. By consolidating product information in one place, this system not only enhances the user experience but also offers small businesses an opportunity to expand their reach and

visibility. The goal is to create a seamless and efficient platform that improves the overall product discovery and buying process in Pakistan.

1928. JUSTICELINK

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

JusticeLink is a secure, cloud-based court case management system designed to digitalize and streamline judicial processes from case filing to final verdict. It addresses critical inefficiencies in traditional court operations—such as manual paperwork, fragmented systems, and lack of real-time access—by integrating functionalities like centralized case tracking, automated scheduling, secure document and evidence handling, and real-time communication tools. A key enhancement of JusticeLink is the incorporation of **One-Time Password (OTP)** verification for user login, ensuring robust security and restricted access to sensitive legal data for authorized personnel only.

Built using technologies such as React.js, Node.js, AWS, and MySQL, and secured with SSL, TSL, and OTP mechanisms, JusticeLink ensures data integrity, legal compliance, and system scalability. The platform supports both web and mobile access, enabling judges, lawyers, and court staff to operate more efficiently from any location. With built-in analytics and reporting tools, it provides actionable insights into caseloads, performance, and bottlenecks.

The project leverages knowledge areas including cloud computing, database systems, cybersecurity, and full-stack web development to deliver a unified solution for court management. JusticeLink is expected to significantly improve operational efficiency, reduce administrative delays, enhance transparency, and strengthen security across all levels of the judicial system.

1929. ASKUCP APP: ENHANCING CAMPUS ACCESSIBILITY AND STUDENT EXPERIENCE

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

The Ask UCP app is a smart, AI-powered mobile application designed to enhance the university experience for students at the University of Central Punjab. The application addresses common academic and administrative hurdles by providing quick access to university information, navigation services, and direct support via a conversational chatbot. The platform supports various services such as campus directions, fee challan submissions, ID card photo uploads, and teacher directories, all centralized in one user-friendly app. With features like NLP-driven chatbot interaction, real-time campus maps, feedback systems, and admin controls, Ask UCP redefines student engagement and communication within the campus.

1930. AUTO PRIME AUCTION

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

Auto Prime Auction is an AI-powered car auction platform designed to revolutionize vehicle buying and selling in Pakistan by introducing transparency, fair pricing, and real-time bidding. Unlike traditional classified platforms, it utilizes supervised machine

learning algorithms—such as KNN, Lasso Regression, ANN, and SVM—to accurately estimate car prices and evaluate vehicle conditions based on structured inspection sheets. The platform offers secure user authentication, premium listings, and seamless integration of secure payment gateways to enhance user trust.

1931. RESCUEGUIDE APP: EMERGENCY ASSISTANCE AND FIRST AID SOLUTIONS

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

The Rescue Guide App is a mobile-based emergency response system designed to address the critical need for real-time, accessible, and reliable emergency assistance in regions with underdeveloped infrastructure, such as Pakistan. Existing solutions are fragmented, offering limited features like GPS tracking or first aid guidance without comprehensive integration or offline capabilities. This application bridges these gaps by providing a unified, multi-user platform that operates effectively even in low-connectivity environments. The app supports three primary user roles—General Users, Rescue Personnel, and Administrators—each equipped with role-specific functionalities including secure CNIC-linked OTP authentication, real-time GPS tracking, impact-triggered SOS alerts, AI-powered first aid assistance, and SMS-based offline communication. Built using Flutter, Firebase, Twilio, and TensorFlow Lite, the system ensures a secure, scalable, and cross-platform experience. This document outlines the system's background, objectives, functional and non-functional requirements, technical architecture, and project plan. It highlights the unique value of the Rescue Guide App in enhancing public safety, promoting emergency preparedness, and supporting community-level rescue operations through technology-driven innovation.

1932. SCANSANTE: EVALUATE NUTRITIONAL QUALITY IN AN INSTANT

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

Long ingredient lists on food packaging can be confusing, especially for those with allergies or specific health concerns. Unfamiliar or scientific names make it difficult to identify safe options, causing stress when choosing food. Individuals often prefer products with fewer, natural ingredients, avoiding artificial additives and preservatives. Shorter ingredient lists make it easier to align with specific health goals.

1933. CODICE PARCHEGGIO: SMART QR PARKING MANAGEMENT

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

"Codice Parcheggio" is an AI-powered smart parking system that modernizes traditional parking through automated vehicle monitoring, real-time slot tracking, and mobile reservations. Developed using Flutter, the application enables users to reserve and pay for parking via smartphone, while camera-based systems identify license plates and detect slot availability using object detection models. The platform solves critical issues such as

congestion, inefficient manual management, and limited real-time data. Administrators benefit from data analytics and usage patterns, and users enjoy a seamless parking experience. Designed for scalability and affordability, "Codice Parcheggio" is ideal for institutions and urban environments seeking intelligent, low-cost parking solutions.

1934. SMART ATTENDANCE AUTOMATION SYSTEM

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

In today's fast-paced world, organizations and institutions need a more efficient and secure way to track attendance. Traditional methods such as manual entries, ID cards, or outdated biometric systems are not only time-consuming but also prone to errors and misuse. Issues like buddy punching, proxy attendance, and data mismanagement make these systems unreliable and inefficient. Many existing solutions either rely on a single biometric method or lack real-time verification, which reduces accuracy and makes attendance tracking cumbersome. Administrators often struggle to manage records, generate reports, and integrate attendance data into their workflows, leading to unnecessary administrative overhead. With the rise of remote and hybrid work models and the increasing need for secure access control, organizations require a modern, automated, and intelligent attendance system. The Smart Attendance Automation System solves these problems by combining facial recognition and voice authentication for real-time attendance tracking. This eliminates manual errors, prevents fraudulent practices, and reduces administrative workload. By offering a seamless, scalable, and user-friendly solution, this system ensures accurate identification, simplifies record management, and integrates effortlessly with existing infrastructures. Whether in workplaces, schools, or other institutions, it enhances security, improves efficiency, and makes attendance tracking effortless.

1935. SHADOWLANDS: SECRETS WITHIN AN IMMERSIVE ACTION RPG EXPERIENCE

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Shadowlands: Secrets Within is a third-person, single-player action RPG designed using Unreal Engine 5. The game addresses the challenge of creating a compact yet immersive role-playing experience that balances storytelling, exploration, and stamina-based combat within the constraints of a three-member development team. Players assume the role of Elysia, a lone warrior navigating through three distinct biomes—a scorched desert, haunted forest, and ancient dungeon—each filled with environmental lore, hostile enemies, and a final boss encounter.

The project focuses on delivering a technically and narratively cohesive gameplay loop that encourages exploration and strategic decision-making. It leverages core knowledge areas such as object-oriented programming (C++), AI scripting, 3D environment design, UI/UX integration, and modular game architecture. The game integrates narrative artifacts and combat interactions to enhance player immersion without overwhelming complexity.

The expected outcome is a polished, playable demo featuring responsive combat, collectible lore artifacts, and a clear end state, making it suitable for academic submission

and future portfolio use. The project demonstrates the team's capability to deliver a focused, independent game project through structured planning, interdisciplinary collaboration, and adherence to software engineering principles.

1936. BOOKVISTA (AI-POWERED BOOKS DISCOVERY AND ASSISTANCE PLATFORM)

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

BookVista is an AI-powered web platform that aims to improve how readers discover, explore, and interact with books. In the digital age, users often struggle with finding books that match their interests or mood, especially due to the lack of personalization and smart tools in existing platforms. Many platforms either offer basic recommendations, no summaries, or are limited to specific services like audiobooks. BookVista addresses these problems by combining advanced AI technologies in one user-friendly place.

The system will use Natural Language Processing (NLP) to generate smart summaries of books in different lengths and styles. A built-in Text-to-Speech (TTS) feature will let users listen to summaries, making the platform accessible for visually impaired users or those who prefer audio. An AI chatbot will also be included to answer book-related queries and provide mood-based suggestions. Users can rate, review, and save books, as well as track PDF availability through verified sources.

The project will use technologies such as React.js, Tailwind CSS, Node.js, Firebase/MongoDB, custom NLP models, and Google TTS APIs. These knowledge areas include web development, AI integration, natural language processing, sentiment analysis, and UI/UX design.

The expected result is a smart, time-saving, and personalized reading assistant that makes book discovery easier, faster, and more engaging. BookVista will serve readers of all types—students, casual readers, and researchers—by offering a complete and intelligent solution for modern book exploration.

1937. AI-POWERED VIDEO TRANSLATION AND LIP SYNCING PLATFORM

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

1938. HUNARMAND (SMART BIDDING & SERVICE HUB)

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Hunarmand (Smart Bidding & Service Hub) is a digital platform designed to address the inefficiencies and lack of transparency in hiring local skilled service providers such as electricians, plumbers, carpenters, and technicians. The project focuses on bridging the gap between service seekers and providers through an organized, user-friendly mobile application that facilitates service booking via a competitive bidding system.

The significance of the problem lies in the unorganized nature of the local service sector, where customers often struggle to find verified and reliable workers, while skilled individuals lack

digital exposure and consistent work opportunities. Existing solutions are either too generalized or fail to cater to the specific needs of on-site service industries in local communities.

The development of Hunarmand will involve multiple knowledge areas including full-stack development, database management, real-time bidding mechanisms, user experience (UI/UX) design, security protocols, and project management methodologies. These areas will be applied to ensure the platform is functional, secure, scalable, and easy to use for both technical and non-technical users.

The expected results of the project include a fully operational platform that enables users to post service requirements, receive bids from registered service providers, and select the most suitable option based on ratings, reviews, and pricing. Additionally, the platform aims to formalize the local skilled labor market, enhance employment opportunities, and build trust through a transparent and competitive ecosystem.

In summary, Hunarmand seeks to provide a practical, scalable solution that empowers both customers and skilled workers, while contributing to the digital transformation of the local service industry.

1939. LEARNTRADE PLATFORM

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

The LearnTrade Platform is a web-based system designed to facilitate personalized skill-sharing through AI-driven peer matching. It addresses the limitations of traditional education and current e-learning platforms by providing a flexible, community-centered environment where individuals can both teach and learn. The project focuses on solving the problem of inaccessible or rigid learning models that fail to cater to diverse learning preferences and personal interests. By allowing users to create detailed profiles and connect with others based on mutual learning goals, the platform encourages two-way educational interactions. The system integrates artificial intelligence for intelligent match recommendations, supports real-time communication tools such as chat and video, and incorporates gamification to promote continuous engagement. Key knowledge areas used in the project include web development, AI-based recommendation systems, database design, and user experience design. The expected outcome is a scalable and interactive platform that empowers people to grow their skills through collaborative, self-directed learning.

1940. RESOLVIX

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

The exponential increase in log data from distributed IT systems has made incident management a daunting task, characterized by inefficiencies and prolonged resolution times. Existing tools address isolated aspects of this challenge—log analysis, monitoring, or ticketing—but fail to offer an integrated solution, leaving system administrators overwhelmed and businesses vulnerable to extended downtimes. "Resolvix" is an innovative platform designed to tackle this problem by unifying log analysis, automated ticketing, real-time collaboration, and AI-driven documentation recommendations into a single, scalable system. Built with Python, FastAPI, and Docker, it leverages machine learning to transform complex log data into actionable insights, prioritizes incidents by severity, and automates workflows with intelligent team assignments. The significance of this project lies in its ability to reduce incident resolution times, optimize resource use, and provide an affordable, user-friendly

tool for small businesses and students. Key knowledge areas include machine learning, software engineering, and cloud technologies, with expected results being a fully functional platform that enhances IT infrastructure management.

1941. GUARDIAN ANGEL

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

Guardian Angel is an AI-powered smart home automation and health monitoring system designed to enhance the safety, well-being, and independence of elderly and disabled individuals. By integrating Artificial Intelligence (AI), Internet of Things (IoT), and real-time monitoring, this system provides essential functionalities such as fall detection, emergency alerts, health tracking, home automation, and caregiver support.

The system features fall detection that alerts caregivers in real-time, health monitoring that tracks heart rate and smart home automation that enables users to control lighting.

Guardian Angel is positioned for commercial adoption, with potential applications in elderly care facilities, healthcare institutions, corporate wellness programs, and smart home ecosystems. The project leverages Firebase Firestore for cloud integration, TensorFlow Lite for AI-based health monitoring, and Flutter for mobile application development.

By providing a seamless, secure, and intelligent approach to elderly care, Guardian Angel aims to revolutionize remote health monitoring, emergency response, and independent living through AI and IoT technologies. The system is designed to be user-friendly and highly reliable, ensuring real-time assistance, improved caregiver connectivity, and enhanced safety for the elderly.

1942. AI PROPEL

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

AI Propel is an advanced platform designed to change the way intellectual property (IP) is created by using AI for idea generation, patent validation, and review automation. It helps researchers, inventors, and creative professionals who often spend a lot of time and effort on complex tasks like validating new ideas. AI Propel uses cutting-edge AI technologies such as GPT-4, TensorFlow, and NLP to automate tasks like searching for existing patents, finding research gaps, and ensuring new patents are unique.

One of the key features of AI Propel is an interactive chatbot that guides users through the process of refining their ideas and checking them against existing patents. The platform's front end is built using React to make it easy to use, while the backend is powered by Node.js, ensuring that the system is scalable and efficient in managing data. Data is securely stored in MongoDB, and the platform is deployed on AWS for high availability and optimized performance.

By combining these features into one platform, AI Propel saves researchers and inventors a lot of time in the process of refining and validating their ideas. The automated literature review feature helps users quickly gain insights into research trends and find gaps in existing studies. Additionally, the system assists in creating patent drafts and claims, improving the accuracy and efficiency of the patenting process.

1943. SMARTML: AI-POWERED MODEL BUILDER

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

In this project, we introduce SMARTML, an AI-powered platform designed to simplify the complexities of machine learning (ML) for non-technical users, such as small business owners, students, and educators. Despite the growing potential of ML in various sectors, its technical requirements have limited its accessibility to a wider audience. SMARTML bridges this gap by providing an intuitive, no-code interface that allows users to upload datasets, automatically preprocess data, and receive model recommendations for tasks such as regression and classification. The platform also automates time-consuming tasks like hyperparameter tuning, enabling users to quickly obtain optimized results. With a focus on practicality, SMARTML integrates key features like model training, private sharing, and cloud deployment, ensuring that businesses and students alike can leverage machine learning without extensive technical knowledge. The platform is scalable, cost-effective, and designed to enhance productivity by automating repetitive tasks while empowering users to make data-driven decisions. SMARTML aims to democratize machine learning, making it accessible, efficient, and valuable for everyone.

1944. CAFELENS: AI-POWERED AUGMENTED REALITY CAFÉ ASSISTANT

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

This project aims to improve the café experience by using Augmented Reality (AR) and Artificial Intelligence (AI). Customers can use a mobile app to view 3D models of menu items in AR, get personalized recommendations, and interact with an AI chatbot. The app will also have a web version for cross-platform support. A key feature of the project is the development of a system to convert 2D images of menu items into 3D models, making it easier for café owners to update their menus. The goal is to make the dining experience more interactive and enjoyable for customers while helping café owners increase sales.

1945. HIREMATE: INTELLIGENT TALENT PROFILING AND RECRUITMENT SOLUTION

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

HireMate: Intelligent Talent Profiling and Recruitment Solution addresses the inefficiencies in traditional hiring by streamlining candidate evaluation. The platform integrates advanced tools to analyze resumes, conduct automated and live interviews, and assess behavioral cues, ensuring a fair and accurate hiring process. It introduces a unique ranking system and a user-friendly interface for employers, reducing hiring time and improving decision quality. By combining skill assessment, behavioral insights, and performance metrics, HireMate offers a transparent and merit-based solution, setting it apart from existing recruitment systems. This project aims to enhance recruitment efficiency and accuracy for both job seekers and employers.

1946. MUN TU SHUDAM, TU MUN SHUDI (I HAVE BECOME YOU, YOU HAVE BECOME ME)

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

In the realm of artificial intelligence, systems continue to lack a deep understanding of individual human identities. Most AI tools provide generic responses, failing to recognize the unique personalities, emotions, and thought patterns of each user. This project, titled “Man Tu Shudam ,Tu Man Shudi” (I have become you, and You have become me), addresses that gap by creating a general-purpose AI- powered digital twin that mirrors the user’s emotional and cognitive behavior over time.

The proposed system utilizes psychometric profiling, sentiment analysis, and long-term conversational memory to build an adaptive clone that evolves with its user. Whether the context is learning, emotional support, decision-making, or productivity, the digital twin adapts its tone, language, and interaction style to align with the user’s personality and state of mind.

The system combines key areas of artificial intelligence, including natural language understanding, personality modeling, adaptive memory systems, and emotionally intelligent dialogue generation. It is designed to continuously learn and refine the user’s personality profile through interaction, gradually creating a digital presence that feels natural, personal, and human-like.

By integrating concepts from machine learning, human-computer interaction, and behavioral analysis, the project aims to transform AI from being just a tool into a true digital reflection of the self—a companion that listens, evolves, and engages with emotional awareness.

1947. TERROR: A SURVIVAL HORROR EXPERIENCE

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Terror Game is an immersive, interactive horror experience that places players in a sinister, eerie environment where survival is the key. The game pits players against a menacing, supernatural Robot who roams a decrepit, labyrinthine mansion. Players must use stealth, strategy, and quick thinking to evade Robot's grasp, solve intricate puzzles, and uncover the dark secrets hidden within the mansion's walls. With a focus on atmospheric tension, realistic sound design, and a compelling narrative, Terror Game aims to deliver a uniquely terrifying experience that challenges players' nerves and problem-solving skills. The game's dynamic AI ensures that each encounter with is unpredictable, keeping players on edge throughout their journey. This combination of suspense, strategy, and horror makes Terror Game a standout title in the survival horror genre.

1948. AI-DRIVEN SKINCARE AND TONETAILOR

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

The AI-Driven Skincare and ToneTailor project is a comprehensive mobile/web application integrating AI, computer vision, and deep learning to address challenges in skincare diagnosis and fashion recommendations. The core problem tackled is the

inability to self-diagnose skin issues (like acne or dryness), and confusion in selecting products such as foundations or outfits matching skin tone and seasonal trends. By analyzing facial images, the system provides personalized recommendations for skincare, foundations, and clothing. Technologies used include Flutter, Firebase, OpenCV, PyTorch, and Python (Flask/Django), aimed at improving users' confidence and reducing guesswork in personal care.

1949. CRICKET TEAM SELECTION COMMITTEE USING ARTIFICIAL INTELLIGENCE (CTSCAI)

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

The project "Cricket Team Selection Committee using Artificial Intelligence (CTSCAI)" aims to develop a web-based decision support system that automates and optimizes the selection of a cricket team. The system leverages historical data, player statistics, pitch conditions, opposition analysis, and performance trends to suggest the most suitable team lineup. This project addresses the growing need for unbiased and data-driven decision-making in sports team selection. It incorporates areas such as machine learning, data mining, and web development. The outcome will be a software system that enhances the objectivity, accuracy, and fairness of cricket team selection processes.

1950. CITI-FITNESS- AI FINTESS AND NUTRITION PARTNER

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

Access to personalized fitness and nutrition guidance remains limited for individuals due to time constraints, lack of expert availability, and the absence of tailored solutions. These challenges often result in ineffective workout routines, poor dietary habits, and inconsistent health progress. This project, Citi-Fitness, addresses these gaps by providing an AI-powered web platform that delivers customized fitness plans, nutritional recommendations, and virtual wellness support. The system uses user-specific inputs—such as age, gender, body metrics, and personal goals—to generate individualized health suggestions and daily routines.

Citi-Fitness integrates modern technologies from multiple domains, including artificial intelligence, web development, and health science. It features tools such as BMI and BMR calculators, an interactive chatbot for real-time fitness and diet queries, and an e-commerce portal offering health and fitness products. Developed using Python, Flask, HTML, CSS, and JavaScript, the platform emphasizes scalability, responsiveness, and ease of use. By combining AI-driven analysis, user-friendly design, and accessible digital tools, Citi-Fitness aims to promote healthier lifestyles and empower users to take control of their wellness journey.

1951. GUDDI GLADIATORS

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

The Basant (a festival that was once widely celebrated) has lost much of its charm over the years due to urbanization, growing safety concerns, and disinterest of the younger

generation. Additionally, many modern games lack cultural representation and fail to promote outdoor activities, leading to a lesser connection to traditional experience. To preserve this custom, we are aiming to introduce Guddi Gladiators (a 3D kite battle game). Our game aims to bridge the gap between people and Basant by combining traditional kite flying with modern technology.

To create an interactive and engaging game, we will utilize Unity 3D for game development, Blender for 3D modelling, and Photon for setting up multiplayer networking and artificial intelligence. Players will have the chance to take part in strategic battles, experience realistic physics and purchase and customize kites, all set up in Basant-inspired environments.

The expected product will be a culturally rich game inspired by the festival that will truly capture the spirit of Basant, bring players together through multiplayer features and expertly combine tradition with technology. The aim of our project is to produce a vibrant and engaging multiplayer game that appeals to its users, along with bringing Basant back to life on a digital platform.

1952. SMART SCRAP MANAGEMENT SYSTEM: CONNECTING COLLECTORS AND CONTRIBUTERS FOR ECO-FRIENDLY RECYCLING

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

The **Smart Scrap Management System** is a state-of-the-art digital platform that connects scrap generators (households and businesses) with scrap collectors, streamlining the recycling process and fostering environmental sustainability. The application leverages cutting-edge Artificial Intelligence (AI) using Convolutional Neural Networks (CNNs) to accurately classify scrap materials from uploaded images.

Coupled with a dynamic pricing engine that uses real-time market data, the system advises users on fair pricing for their scrap items. Furthermore, geolocation-based functionalities provide real-time notifications to nearby collectors, optimizing pickup logistics. Designed as a dual-platform solution (web and mobile), the system emphasizes security, scalability, and user-friendliness. This document provides an in-depth analysis of the system requirements, architecture, and proposed implementation strategy, ensuring that every aspect—from technical integration to business impact—is meticulously planned and documented.

1953. PAK-VPN FOR FREELANCERS: SECURE SSH-BASED VPN SERVICE FOR UNINTERRUPTED WORK

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

PAK-VPN is a secure, SSH-based Virtual Private Network (VPN) designed to provide Pakistani freelancers with uninterrupted access to global platforms like Upwork and Fiverr. The project addresses the problem of restricted internet access, high-cost VPNs, and privacy concerns by offering an affordable, locally optimized solution. Utilizing SSH tunneling and encryption, PAK-VPN ensures secure data transmission. The project leverages knowledge areas such as network security, software engineering, and mobile app development. Expected results include a

functional VPN server, a user-friendly Android client, and a scalable architecture supporting at least 100 concurrent users.

1954. BIORISHHEALTH AI: HEALTH MANAGEMENT SYSTEM

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

BiorisHealth AI is an intelligent, AI/ML-driven healthcare management system designed to enhance communication and collaboration between patients, doctors, laboratories, and family heads. The system integrates data from various sources and leverages machine learning for early disease prediction, diagnosis enhancement, and personalized healthcare recommendations. With a user-friendly interface and strong security features, it aims to provide an accessible, secure, and proactive health management solution.

1955. FINTECH: AI POWERED FINANCE SOLUTIONS

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

The proposed project, FinTech: AI Powered Finance Solutions, aims to revolutionize financial document processing using an AI-based Retrieval-Augmented Generation (RAG) system. Leveraging Large Language Models (LLMs), the system enables users to upload, query, and retrieve insights from structured and unstructured financial documents such as PDFs and CSVs. Traditional manual data analysis in finance is time-consuming and inefficient, hindering decision-making. This solution addresses those challenges by automating document indexing with Chroma-DB and secure vector storage, ensuring privacy while improving query accuracy. The system provides prompt-based analysis, precise financial responses, and an intuitive interface built with Streamlit. Developed through agile methodology, it incorporates iterative feedback, ensuring scalability, security, and usability. The platform not only minimizes manual effort and time spent on document analysis but also enhances financial decision-making through real-time, AI-driven insights—paving the way for smarter, more efficient finance operations.

1956. BARBERBAY.INFO

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

Barberbay.info is an artificial intelligence-powered grooming platform designed to enhance and modernize the grooming experience. It offers users the ability to receive personalized haircut suggestions based on their facial features, view detailed listings of barbershops around the globe, and communicate directly with barbers through real-time messaging. The platform goes further by enabling users to book at-home grooming services and shop for salon and beauty products from third-party vendors, bringing a comprehensive solution to the fragmented barbering ecosystem. Through the integration of artificial intelligence, real-time communication technologies, and e-commerce capabilities, Barberbay.info offers an all-in-one experience that caters to both service seekers and providers.

1957. AI-POWERED JOB ADVISOR

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

AI-Powered Job Advisor is an online platform utilizing artificial intelligence as a tool to help job seekers become more employable. It assists the users by producing a CV that is tailor made as per the requirements, suggests careers which match their skills, outlines skill gaps and provides suggestions in the form of courses, certifications and others. The system uses NLP, LLMs and machine learning models to scan a user's profile with job descriptions and to return a ranked score of compatibility. It seeks to minimize rates of job application rejection by enabling users to customize their resumes appropriately and learn what qualifications are lacking for their preferred jobs. The application also allows integration with job portals such as; LinkedIn and Glassdoor, which promote user convenience and scope of the job.

1958. FUSIONFINDS EXPERIENCE

SMART

SHOPPING

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

FusionFinds is an AI-driven e-commerce application aimed at solving key challenges in online shopping such as poor product discovery, lack of personalization, and high return rates. By leveraging machine learning, natural language processing, computer vision and the app offers features like image-based search, personalized recommendations, voice assistance. These innovations enhance user satisfaction, reduce returns, and support retailers with tools like fraud detection and dynamic pricing. FusionFinds demonstrates how intelligent systems can transform digital commerce, particularly in developing markets like Pakistan, by making shopping smarter, faster, and more user-centric.

1959. SHUTTERUPLENS - OPTIMIZED AI PHOTOGRAPHY COMPANION

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

ShutterUpLens is an AI-powered virtual photography assistant designed to bridge the gap between technical complexity and creative photography. This project targets key challenges faced by photographers especially beginners Such as the lack of guidance, time-consuming post-processing, and limited professional networking tools. By combining tethered shooting with scene analysis, camera setting recommendations, and intelligent pose suggestions, ShutterUpLens aims to enhance both the quality and efficiency of photography sessions.

The project integrates multiple advanced technologies, including computer vision, deep learning, speech recognition, and cloud computing. AI models are used to analyze images, suggest optimized settings, detect human subjects, and recommend trending poses. It further incorporates a professional photographer portal for portfolio management, client communication, bookings, and feedback streamlining the entire workflow from shoot to delivery.

Knowledge areas utilized include artificial intelligence, computer vision, web development, image processing, cloud infrastructure, and UI/UX design. The end result will be a user-friendly.

1960. DIGITAL PAYMENT GATEWAY

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

As more individuals utilize e-commerce websites, online shopping platforms are in greater demand. However, the growing prevalence of dishonest behaviors like fraud and chargebacks erodes consumer confidence in online transactions. Furthermore, traditional methods-based e-commerce platforms run the danger of money losses due to hacker assaults. Our project intends to provide a trustworthy and safe blockchain payment gateway to solve this problem. Companies will gain from the use of this cut-off in handling and accepting cryptocurrency payments. Through a user-friendly interface, our internet-based system enables customers to make transactions with the given detailed specifications. Every transaction gets a specific payment address and is passed through the intricate algorithmic verification and confirmation system. After the completion, this project will be the driver of the digital economy since e-commerce businesses will be able to use it as a secure and dependable method of receiving cryptocurrency payments. It will be the factor that will be the main promoter of the use of virtual currencies, and the businesses will get an affordable way to include transactions.

1961. PERSONALIZED PC RECOMMENDATIONS

Project Advisor	MR. SYED IRTAZA MUZAFFAR
Status	In Process of Completion

The proposed project, titled Personalized PC Recommendations, is a comprehensive solution designed to simplify and personalize the PC-building process through the use of artificial intelligence and real-time data integration. This system goes beyond conventional static build websites by tailoring recommendations based on a wide range of individual user needs — including gaming, content creation, programming, video editing, and general productivity.

At the core of the platform lies a hybrid AI recommendation engine, which intelligently processes user-submitted requirements — such as budget, brand preferences, use case, and energy efficiency — and maps them to a compatible and optimized PC build. Unlike traditional platforms that offer generic gaming configurations, our solution leverages rule-based logic and data-driven filtering to generate recommendations that are both technically sound and budget-conscious.

The system incorporates real-time component price tracking by integrating with external APIs (e.g., PCPartPicker, Amazon), ensuring that users receive up-to-date pricing and availability details. A robust compatibility checking module ensures that recommended parts (CPU, GPU, motherboard, PSU, etc.) are not only powerful but also mutually compatible.

To enhance user accessibility and future scalability, the platform is being developed as both a responsive web application and a hybrid mobile app using technologies like React.js, React Native, Python (Flask/Django), and MySQL. This

ensures cross-device functionality and aligns with modern software development standards.

Additional intelligent features include:

- A chatbot assistant powered by NLP for guided support
- A multi-language interface with future support for Urdu and other regional languages
- User authentication, build saving, and comparison tools
- An admin panel for dynamic component management

By combining a modern UI, mobile responsiveness, and AI-powered analytics, the platform offers an intuitive experience for both first-time builders and professional users. The entire development stack utilizes open-source technologies to ensure cost-effectiveness, flexibility, and maintainability.

In summary, this project presents a scalable, intelligent, and user-centric approach to PC configuration that empowers users with accurate, real-time, and personalized build recommendations — packaged into a single unified platform accessible from web and mobile devices.

1962. ROADSPARK (TRAVEL SAFE)

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

Abstract Road Spark (travel safe) is a mobile application that provides reliable road assistance throughout Pakistan. The application solves the acute issue of slow emergency service in the event of a car breakdown, a flat tire, or running out of fuel, particularly when service stations are few and far between. Many of the existing solutions do not address local needs like bilingual support, flexible payment modes, or real-time tracking. Road Spark bridges these gaps to an extent by providing AI voice commands for hands-free assistance in-between, real-time geolocation, and multiple payment methods including cash, JazzCash, EasyPaisa, and card transactions.

The project involves key knowledge areas such as **AI integration** for voice recognition, cross platform mobile development using Flutter, real-time tracking systems using Google Maps and the integration of secure payment gateways. The product targets a mobile application delivering real-time tracking and AI voice recognition between Urdu and English while enabling emergency services across various conditions of battery levels and internet strength. Road Spark uses innovation and local solutions to build emergency support systems which strengthen roadside safety for drivers.

1963. ADAPTOID WARS: EVOLVING AI STRATEGY GAME

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

Adaptoid Wars tackles a persistent issue in strategy gaming: the predictability of AI opponents. Traditional strategy games often feature AI systems that become easy to exploit once players discover their patterns, leading to diminished engagement over time. Our project introduces a turn-based strategy game with an innovative adaptive AI system that evolves in real-time based on player behavior. Unlike conventional approaches that

artificially increase difficulty through unfair advantages, our AI learns from player tactics and develops counter-strategies that feel natural and challenging.

By integrating advanced techniques like decision trees, heuristic evaluation, and dynamic pathfinding algorithms, we're creating an opponent that adapts without becoming frustrating. This adaptive AI combines with procedurally generated maps and customizable units to ensure every play through feels fresh and engaging.

The significance of our work extends beyond entertainment. The adaptive learning techniques we're implementing have potential applications in educational software, training simulations, and other AI-driven fields. Through Adaptoid Wars, we're demonstrating how game AI can evolve beyond simple rule-based systems to create more meaningful player experiences while establishing a benchmark for future adaptive AI implementations in gaming.

1964. VANGUARD SQUAD

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

Game development is a complex and evolving field that combines creativity with technical skill. Our project, *Vanguard Squad*, is a tactical multiplayer action game that addresses the challenge of creating a balanced, strategy-focused team experience. The core idea is to design a game where players must rely on cooperation and smart decision-making rather than just fast reflexes. Each of the four playable characters has a distinct role sharp-shooters, a tracker, and a reviver making teamwork essential to complete objectives.

The significance of this project lies in its focus on real-time coordination, adaptive enemy AI, and smooth multiplayer gameplay. Unlike typical shooters that emphasize individual performance, *Vanguard Squad* encourages communication, role distribution, and situational awareness. We're using Unreal Engine with both Blueprints and C++ to achieve a balance between visual development and technical depth.

This project pulls from various knowledge areas including game development, software engineering, artificial intelligence, networking, animation, and performance optimization. By the end of the project, we aim to deliver a playable, visually appealing, and technically sound game that demonstrates modern game development principles while offering an engaging cooperative experience.

1965. GLOWBOT: YOUR AI-POWERED SKIN & DIET EXPERT

Project Advisor	MR. SYED SAQLAIN HAIDER
Status	In Process of Completion

GlowBot is an advanced AI-driven mobile application designed to support comprehensive skin health monitoring, dietary planning, and stress level assessment. Leveraging deep learning and real-time image analysis, the application identifies a range of skin concerns, including acne, pigmentation, and dullness. It also integrates with wearable smart devices to collect biometric data related to stress. Based on these insights, GlowBot provides personalized skincare product recommendations, nutrient-optimized dietary plans, and evidence-based mental wellness guidance. Additionally, the platform enables users to schedule live video consultations with certified dermatologists via Google Meet. This all-in-one solution offers a convenient and cost-effective approach to modern skincare and wellness management.

1966. ON-DEMAND INTEGRATED SERVICE PLATFORM FOR DOMESTIC ASSISTANCE

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

1967. AI-DRIVEN HEALTH & DIET RECOMMENDATION SYSTEM

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

1968. ONCOVISION

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

OncoVision is a research-driven project that uses deep learning approaches to automate the segmentation of cancer cells in histopathology pictures. Time-consuming, subjective, and prone to human error, manual interpretation of these medical pictures might postpone diagnosis and jeopardise the precision of therapy. This research intends to create a hybrid model that greatly increases the accuracy and speed of cancer diagnosis by combining Vision Transformers (ViTs) with Convolutional Neural Networks (CNNs). Real-time image uploading and analysis by medical specialists will be made possible by the proposed system's deployment as a full-stack MERN (MongoDB, Express.js, React.js, and Node.js) web application. The goal of this project is to develop a scalable, high-performance segmentation tool that achieves at least 90% accuracy by combining expertise in machine learning, computer vision, and medical imaging. OncoVision's ultimate goal is to improve diagnostic accessibility and reliability, assisting pathologists and enhancing patient outcomes throughout healthcare systems.

1969. FINTREND

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

In the ever-evolving world of finance, investors demand more than just numerical data to make decisions—they need insights derived from real-time sentiment and news. FinTrend is a web-based AI platform that integrates Natural Language Processing (NLP) and time-series deep learning to predict short-term stock market trends. By combining structured data (historical stock prices) with unstructured data (financial news sentiment), FinTrend provides a more holistic and timely forecast to empower investors. Unlike traditional prediction systems that ignore immediate market influencers like news events, FinTrend leverages cutting-edge models like FinBERT for sentiment analysis and LSTM/GRU for trend prediction. The platform is tailored to help both individual investors and financial analysts make data-backed investment decisions.

1970. MELANOMA DETECTION ALLY

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

Skin cancer, particularly melanoma, is one of the most dangerous forms of cancer due to its potential to spread rapidly if not detected early. Traditional diagnosis methods require clinical visits, expert evaluation, and expensive procedures, which can be inaccessible or time-consuming for many individuals. This project presents *Melanoma Detection Ally*, a cross-platform mobile application designed to detect melanoma using deep learning techniques. The application allows users to upload images of their skin lesions, which are analyzed using custom built deep learning models. These models-based on *CNN*, *VGG*, *AlexNet*, and *ResNet* variants will be trained from scratch using a comprehensive dataset compiled from the *ISIC Archive*, including *HAM10000* and *ISIC 2010–2024*. The system will generate a diagnostic classification along with a confidence score, providing users with insight into the *AI*'s prediction. This project integrates knowledge from computer vision, medical image processing, neural networks, and mobile development. By combining robust model training with user-friendly mobile application deployment, the solution aims to support early-stage melanoma detection and raise awareness of skin health through accessible technology.

1971. VIGILANTEYE

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

Stegomalware—malicious code concealed within seemingly harmless images like animated GIFs—represents an evolving threat that often slips past conventional signaturebased scanners. VigilantEye addresses this gap by systematically evaluating three stateoftheart deep learning paradigms—Convolutional Neural Networks (CNNs), Transformer models, and Generative Adversarial Networks (GANs)—for their ability to detect hidden payloads. We assemble a curated dataset of both clean and stegoinfected GIFs, apply preprocessing steps to extract entropy, metadata, and pixellevel features, and train each architecture under consistent settings.

To demonstrate practicality, we build a lightweight prototype interface (web or mobile) that allows controlled image uploads and delivers realtime inference with clear confidence scores. Our work yields a concise benchmark of detection accuracy, falsepositive rates, and computational requirements, offering actionable insights for future research and the development of robust defenses against multimediacbased malware.

1972. AI-POWERED EXOTIC PLANT ACCLIMATIZATION

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

This project aims to develop an AI-powered mobile app dedicated to the identification, acclimatization, and sustainable care of exotic aroids—highly valued plants known for their striking appearance and sensitivity to environmental changes. Unlike generic plant care apps, this platform uses image recognition and real-time climate data to create personalized care plans that replicate native conditions, improving plant survival and growth. Features include step-by-step acclimatization guides, an interactive origin map,

detailed propagation tips, and a rare arid database with community contributions. Optional expert consultations and a user-friendly interface ensure both novice and experienced collectors can access advanced, tailored plant care support.

1973. FREELANCE PORTFOLIO BUILDER

Project Advisor	MR. ZEESHAN AKRAM
Status	In Process of Completion

The **Freelance Portfolio Builder** is a web-based platform that enables freelancers to create, customize, and showcase their professional portfolios without requiring technical skills. Users can add projects, display testimonials, integrate social profiles, and track portfolio performance through analytics. The system includes a drag-and-drop builder, customizable templates, and a client feedback system. Its goal is to help freelancers improve their online presence, attract clients, and manage their work effectively.

1974. MOBILE-BASED AI-POWERED CANCER PREDICTION AND EXPERT RECOMMENDATION SYSTEM

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

Early detection of cancer significantly improves the chances of successful treatment and survival. Despite advancements, current AI-powered healthcare solutions are mainly diagnostic and not predictive, limiting their utility in proactive healthcare management. This project proposes a **Mobile-Based AI-Powered Cancer Prediction and Expert Recommendation System** that allows users to upload their medical reports, extract data using Optical Character Recognition (OCR), predict cancer risk using an AI model, and connect with relevant oncologists. Incorporating biometric authentication and multilingual support, this system aims to enhance accessibility, data security, and patient empowerment by delivering actionable health insights at their fingertips.

1975. QUICK FIX: AI-POWERED BODY WEAR MARKETPLACE

Project Advisor	MS. AROOJ ZAHRA
Status	In Process of Completion

Online shopping has grown significantly, but choosing the right clothing size and style remains a major challenge. Many customers struggle to find outfits that fit well and match their personal preferences. Existing virtual try-on solutions mostly use 2D images, which fail to provide an accurate representation of how clothes will look on a person. This often leads to customer dissatisfaction, high return rates, and wasted time and money for both shoppers and retailers. Additionally, traditional shopping methods require customers to visit physical stores, making the process time-consuming and inconvenient.

To solve this problem, we have developed an AI-Powered 3D Bodywear Marketplace that enhances the online shopping experience. Our system uses artificial intelligence (AI), computer vision, and 3D modeling to create a realistic virtual try-on experience. Users can upload their images, and the system analyzes their gender, age, and skin tone to recommend the most suitable clothing options. Additionally, it generates a 3D avatar with

the user's face and body shape, allowing them to view a 360-degree preview of how different outfits will look on them. This helps customers make better purchasing decisions, reducing the chances of returning products.

The development of this system involves deep learning techniques such as Convolutional Neural Networks (CNNs) for image processing and 3D reconstruction algorithms to create accurate clothing visualizations. Our platform is designed to be accessible across multiple devices, including mobile applications (Android and iOS), web browsers, and desktop applications. To ensure a smooth user experience, we have integrated Google Firebase for database management, TensorFlow for AI-based image processing, and Three.js for 3D rendering.

This AI-powered marketplace provides benefits to both customers and retailers. Customers receive personalized recommendations and a virtual fitting experience, making online shopping more convenient and reliable. Retailers can effectively showcase their products in 3D, attracting more buyers and reducing return rates. The system also saves time and effort for shoppers by eliminating the need to visit physical stores.

In conclusion, our project aims to revolutionize the online clothing industry by integrating AI and 3D technology. By providing a realistic, personalized, and efficient shopping experience, we bridge the gap between physical and online shopping. This solution enhances customer satisfaction, improves business operations for retailers, and contributes to the future of e-commerce.

1976. INTO THE WILD: A 3D JOURNEY

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

Into the Wild: A 3D Journey is a narrative-driven, offline adventure game where players take on the role of an explorer traveling through untamed wilderness. The game emphasizes immersive storytelling, environmental interaction, and moral decision-making. As players navigate diverse terrains and encounter wildlife, their choices directly shape the direction and outcome of the story. Designed to offer a distraction-free experience, the game avoids internet dependency and ads, focusing instead on critical thinking, survival challenges, and personal engagement with nature. The project aims to deliver a meaningful gameplay experience that blends exploration with impactful storytelling.

1977. SAVENEST: TRACK, COMPARE AND SAVE

Project Advisor	MS. FAIZA KHADIM
Status	In Process of Completion

In modern times, the culture of online shopping is increasing exponentially. You can get everything with just a click. There are so many options that you can get anything, anywhere, but having too many options is not always good. In this fast-paced environment, there is no time for anyone to track down all the desired deals and discounts available for the specific product they are looking for. Consumers must visit multiple online stores to compare prices, leading to a fragmented shopping experience and increased time spent. Furthermore, when shopping for multiple items, consumers face the challenge of optimizing their shopping list to minimize costs, including delivery charges. Current online shopping platforms lack the ability to provide users with personalized recommendations based on their shopping preferences and behavior. Moreover, they fail to consider the overall cost of the shopping list, including

delivery charges, when suggesting products from different stores. As a result, consumers are forced to spend a significant amount of time and effort to find the best deals, leading to a frustrating and inefficient online shopping experience. The prices of grocery items, especially in our country, fluctuate frequently due to discounts, demand, and promotions. Keeping track of such changes manually is almost impossible. The abundance of choices available online can overwhelm consumers, making it difficult to quickly find the best deals and make informed decisions.

1978. CONFESSIONS OF A KILLER

Project Advisor	MS. HINA TAHIR
Status	In Process of Completion

“Confessions Of A Killer” is a psychological horror Alternate Reality Game (ARG) that delivers an immersive experience through its gripping narrative and humanization of a killer. The game follows an amnesiac protagonist , who through investigation gradually uncovers their hidden past as a professional assassin through in-game puzzles and exploring external web-based clues. The game delivers an immersive experience enhancing engagement and depth by encouraging players critical thinking and curiosity. The project integrates multi-platform interaction as its core differentiator amongst other games of a similar genre on the market. The project addresses the current gap in the ARG market , offering a complex and stimulating narrative that encourages players to deeply connect with the protagonist's psychological struggles.Using its unique and unusual method of storytelling and gameplay “Confessions Of A Killer” aims to create an unforgettable gaming experience that will resonate with fans of mystery , horror and interactive storytelling.

1979. VISION-BASED RUBIK'S CUBE RECOGNITION AND SOLVING SYSTEM USING AI

Project Advisor	MS. MAHRUKH BATOOOL
Status	In Process of Completion

This project focuses on creating a system that combines computer vision and artificial intelligence (AI) to recognize and solve a standard 3x3 Rubik's Cube. By employing advanced image processing techniques and AI algorithms, the system can detect the cube's current state, compute an efficient and optimal solution, and provide a step-by-step guide to solving the puzzle. This project highlights the integration of two core technologies computer vision and AI to address a real-world optimization problem. The proposed solution demonstrates the capabilities of automation, optimization, and human machine interaction, making it suitable for practical applications in education, robotics, and AI development.

1980. AI INVENTORY PRO

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

AI Inventory Pro is a research-driven final year project aimed at revolutionizing inventory management in multilingual environments, particularly in Pakistan, where businesses struggle with digitizing documents in English and Urdu (both printed and handwritten). The system leverages AI-powered OCR to achieve high-accuracy text recognition,

supporting both languages, and integrates real-time inventory tracking, analytics, and a user-friendly web interface. By addressing inefficiencies in traditional inventory systems, such as manual data entry errors and lack of multilingual support, the project seeks to enhance operational efficiency in retail and warehousing sectors. Key technologies include machine learning, OCR, software engineering, and multilingual text processing, culminating in a scalable, web-based platform tailored for small to medium enterprises (SMEs).

1981. STRIDESENSE

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

StrideSense is an intelligent assistive navigation system engineered to support visually impaired individuals by enabling safer, more autonomous mobility in real-world environments. The system addresses critical challenges such as obstacle avoidance, fall detection, and real-time tracking through the integration of advanced hardware and software technologies. Core sensing and control are achieved using components like the MPU-6050 (for motion tracking), ultrasonic and proximity sensors (for obstacle detection), and a GPS module (for location tracking). Processing and connectivity are managed by a combination of Raspberry Pi, Arduino Nano, and ESP32-C3 SuperMini, enabling efficient local processing and secure wireless data transmission. Power management is supported by a TP4056 charging module and dedicated battery unit, while user feedback is delivered through vibration motors driven by an L293D SMD motor driver. The system securely communicates real-time location and event data to a cloud-connected caregiver interface, enabling immediate alerts in emergencies such as falls or geo-fence breaches. Knowledge areas leveraged in this project include embedded systems, IoT communication, sensor fusion, and web-based monitoring. The final system delivers a reliable, scalable solution that empowers users with greater independence while keeping caregivers informed and responsive.

1982. AUTOMATED HIRING & RECRUITMENT SYSTEM

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

Our project is designed to transform traditional recruitment practices by automated and optimized hiring process which addresses the inefficiencies of manual resumes and candidate evaluation taking considerable time. Our System Leverages criteria such as skills, education, and experience then filters out unqualified applicants, streamlining the candidate pool early in the process.

Shortlisted candidates proceed to secure, automated web-based assessments tailored to the job role, with webcam monitoring integrated to uphold test integrity and prevent cheating as well as eliminating biasness or any recruiter for any candidate.

Following the assessments, the system generates comprehensive performance reports that highlight each candidate's strengths and weaknesses, supporting HR professionals in making an informed hiring decision. The project encompasses knowledge areas such as data filtering algorithms, web security, AI-based monitoring, and automated report generation. Ultimately reducing administrative load, enhances fairness, and enables more strategic, efficient recruitment processes.

1983. LEAFMEDIC

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

“LeafMedic” is a comprehensive web-based application designed to assist farmers and gardeners in diagnosing plant diseases and pest infestations through advanced image analysis and machine learning. The platform allows users to upload images of affected plants, providing real-time, accurate diagnostics along with detailed treatment recommendations, including medications, sprays, and pesticides with safe application methods. In addition to diagnostic services, LeafMedic integrates a disease and pest encyclopedia, a user-driven community forum, expert consultations, and an e-commerce marketplace for purchasing recommended treatments. The system aims to improve crop health, reduce agricultural losses, and promote sustainable farming practices by providing an accessible, user-friendly solution tailored to the needs of the agricultural community. By addressing the shortcomings of existing tools, LeafMedic positions itself as a holistic and innovative solution for managing plant health effectively.

1984. PATHFINDER PRO: AI-POWERED CAREER NAVIGATOR

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

PathFinder Pro is a next-generation AI-based career guidance system that intelligently blends psychological profiling, academic history, and current market data to deliver deeply personalized career recommendations. It utilizes cutting-edge machine learning and natural language processing techniques to extract insights from user inputs and cross-references them with job market databases, skill trends, and academic resources. The system is modular, scalable, and deployable via a web interface that includes interactive tools such as chatbots, real-time dashboards, and gamified career tracking. The final product will assist students and job seekers in identifying ideal career paths, addressing skill gaps, managing mental health factors, and applying for relevant opportunities via integrated APIs.

1985. PNEUMOTHORAX DETECTION WITH AI

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Pneumothorax, or collapsed lung, is a critical medical condition caused by air leakage into the space between the lung and the chest wall. Accurate and timely diagnosis is essential, as delays can lead to severe complications or even fatalities. Chest X-rays are the primary diagnostic tool for detecting pneumothorax, but interpreting these images requires skilled radiologists, which can be time-consuming and challenging, especially in emergency settings or resource-limited healthcare environments. Healthcare providers urgently need a mobile diagnostic solution that enables instant accurate detection of pneumothorax. We will develop an AI-based application on mobile platforms to help healthcare workers identify pneumothorax right away making medical processes more efficient.

1986. SKILLS SPHERE (VERTICAL AI-BASED CANDIDATE SCREENING AND SKILL ASSESSMENT PLATFORM)

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

The SkillSphere is a next-generation, AI-powered platform designed to revolutionize the recruitment process by automating and enhancing candidate evaluation. The system integrates four AI models each with unique behavioral traits designed to assess candidates' emotional intelligence, communication skills, technical expertise, and behavioral adaptability. The platform also includes a comprehensive English Speaking Skill Module, which allows candidates to interact with an AI system for real-time feedback on their spoken English proficiency. Developed in Flutter for cross-platform compatibility, the platform is available on Android, iOS, and web platforms, ensuring a seamless experience. It helps recruiters make data-driven decisions and serves as an efficient tool for pre-screening candidates before formal interviews.

1987. E-RATION ZONE

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

E-Ration is a mobile application designed to address inefficiencies in Pakistan's traditional ration distribution system. By introducing automation, real-time tracking, and secure digital records, E-Ration aims to combat corruption, mismanagement, and lack of transparency. The platform provides a user-friendly system for beneficiaries, shopkeepers, and government authorities, featuring digital ration cards, inventory tracking, user verification, and real-time reporting. E-Ration ensures equitable access to resources, streamlines ration management, and fosters trust in public distribution systems.

1988. INTELLIGENT WALLET: AI-BASED INFLATION TRACKING AND FRAUD PREVENTION

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

The rapid pace of inflation and currency devaluation, especially in developing economies like Pakistan, is steadily eroding the real value of individual savings. Despite the proliferation of digital wallets, most platforms fail to provide users with real-time insights into how these economic factors affect their financial health. Additionally, many lack advanced fraud detection and personalized investment support. This project proposes the development of "Intelligent Wallet: AI-Based Inflation Tracking and Fraud Prevention," a smart financial application designed to address these critical challenges. The system leverages real-time economic data, machine learning models, and financial analytics to track inflation-adjusted savings, detect fraudulent activity, and provide AI-powered investment recommendations tailored to user goals. Technologies used include Python, JavaScript (Node.js, React.js), TensorFlow, scikit-learn, MongoDB, and MySQL, alongside secure authentication methods. The expected outcome is an intelligent, user-friendly wallet that not only protects but empowers users by improving financial literacy, enhancing investment outcomes, and strengthening transactional security.

1989. TRAVEL-MATE: AI-POWERED JOURNEY PLANNER

Project Advisor	MS. SIDRA KHALID
Status	In Process of Completion

Travel-Mate is an AI-powered mobile application designed to transform the way users explore the cultural and historical richness of Pakistan. While the country boasts a diverse range of heritage landmarks, domestic tourists often face challenges due to the absence of reliable, localized, and cost-effective travel guidance. Existing travel platforms tend to offer generic content, lacking features that cater specifically to heritage tourism, such as bilingual narration, personalized itineraries, and real-time assistance. Travel-Mate bridges this gap by offering an all-in-one solution that includes intelligent trip planning, GPS-enabled navigation, and voice-guided tours in both Urdu and English.

The application dynamically generates itineraries tailored to user preferences such as budget, time availability, and interests. It further enhances the travel experience by offering smart recommendations for nearby attractions, food options, transport facilities, and more—ensuring convenience and cultural immersion for users of all backgrounds. Powered by machine learning, the system adapts in real time to user input and situational changes, providing an educational and accessible travel experience.

From a technical perspective, the app is developed using Flutter for cross-platform compatibility on Android and iOS. Artificial Intelligence and Machine Learning are central to the customization engine, while Natural Language Processing enables bilingual voice narration. Data is managed through a robust backend using MongoDB or MySQL, supporting user profiles, historical site information, and itinerary data. Integration with GPS and third-party APIs ensures real-time data on location, weather, and local conditions. The user interface is designed to be intuitive and visually clean, offering a seamless experience.

The final prototype will be a fully functional and user-tested application, delivering a smart, affordable, and engaging travel assistant. By combining technology with cultural storytelling, Travel-Mate aims to enrich tourism, foster heritage appreciation, and promote inclusive travel across Pakistan.

S25-BSSE

1990. THREADSWEAR.PK

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

Threadsweat.pk is a specialized e-commerce platform exclusively for secondhand imported clothing in Pakistan. It solves the problem of fragmented offline markets and generic online platforms by offering:

- Direct buyer-seller bargaining** (chat-based price negotiation).
- Bidding system** for premium/rare clothing items.
- Flexible delivery scheduling** (user-defined time slots).

Built with **React.js (frontend), Node.js + MongoDB (backend)**, the platform emphasizes Sustainability (reusing clothes) and affordability (competitive pricing via bargaining).

Key Outcomes:

1. A fully functional, clothing-focused marketplace.
2. Insights into user behavior in secondhand fashion e-commerce.

1991. MOODMELODY

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

MoodMelody is a web-based software system that analyzes a user-provided video and a keyword. The system detects objects and facial expressions within the video, and based on this analysis, recommends suitable music and generates a short story inspired by the detected objects and the input keyword. The project integrates computer vision, emotion AI, and natural language generation to deliver a creative, minimalist user experience. The system provides a single music recommendation and a story as output.

1992. DIGITAL URDU SCANNER

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

The “Digital Urdu Scanner” is a Web based application developed to extract, recognize, and translate Urdu text from images into digital format or translate that in English, utilizing modern techniques in computer vision and natural language processing. The primary motivation behind this project stems from the Insufficient presence of the Urdu language in existing OCR and translation technologies, which creates a gap for native speakers and those working with Urdu based documents in digital environments.

The system utilizes Convolutional Neural Networks (CNNs) to detect and accurately recognize handwritten and complex Urdu text within images. Once extracted the recognized text undergoes translation using advanced natural and machine language processing models that ensure coherent and contextually appropriate English output. The application is built using the MERN stack: MongoDB, Express.js, React.js and Node.js allowing for scalable, responsive, and efficient performance on the Web.

Key features of the system include an intuitive user interface, support for various image formats, accurate text detection under different lighting and font conditions, and a seamless integration between OCR and translation components. The Digital Urdu Scanner is particularly beneficial for educators, researchers, archivists and the general public who require reliable digitization of Urdu content.

By bridging the technological gap in Urdu OCR and translation, this project contributes toward promoting digital inclusivity and language preservation in an increasingly digitized world.

1993. SOLAR REVIVE

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

Solar Revive is a web and mobile-based platform for booking solar panel installation, cleaning, and maintenance services. It addresses key challenges in maintaining solar panels such as locating certified professionals, scheduling visits, and ensuring service transparency. The system provides real-time technician tracking, dynamic pricing, annual

subscription options, and AI-powered personalization using ML. By leveraging intelligent service prediction, technician matching, and chatbot assistance, Solar Revive aims to make solar energy more efficient, reliable, and eco-friendly.

1994. TALENTBRIDGE: CONNECTING JOB SEEKERS AND EMPLOYERS WITH SMART CV ANALYSIS

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

TalentBridge is basically a web-based application that work to makes the recruitment process easier for both job seekers and employers. It examines the resumes using **artificial intelligence (AI) and natural language processing (NLP)** to match them to the correct positions. Job seekers can upload their CVs, get feedback, and receive job recommendations. Employers can post jobs and view a list of the best candidates. The system will include CV comparisons and allow real-time suggestions to help improve CVs. The project will be deployed using a **personal domain and will not use WordPress**. This platform bridges the gap between the candidates and recruiters by automating the resume evaluation and shortlisting process. Unlike traditional systems that rely only on basic keyword filtering, TalentBridge uses the AI to understand the content and context of **both CVs and job descriptions**. It helps job seekers improve their chances of being selected by identifying missing skills or weak areas in their CVs. At the same time, it helps employers save time by recommending only the most relevant candidates. **The goal is to make hiring the smarter, faster, and more accurate for everyone involved.**

1995. AUTISM SPEAK FLUENCY

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	In Process of Completion

Autism Speak Fluency is an Android app designed to help individuals improve their speech and communication skills, especially those with autism. It focuses on issues like stammering, pronunciation, and fluency using advanced technologies like Machine Learning, Natural Language Processing, and Audio Processing. The app creates personalized plans and offers real-time feedback through exercises to improve speech and confidence. As users progress, the app adapts to their needs, helping them communicate more clearly in everyday situations.

1996. EQUILIFE: A WEB-BASED WELLNESS PLATFORM FOR MENTAL AND PHYSICAL HEALTH

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	In Process of Completion

Many people struggle to maintain both mental and physical health due to separate and incomplete wellness solutions. Existing apps often focus only on one aspect, making it difficult to track overall well-being in one place.

EquiLife is a web-based platform that combines mental and physical health management in a single solution. It provides AI-driven mental health assessments, personalized self-

care tips, fitness tracking, and nutrition analysis. Gamification and community features help users stay engaged and motivated. The platform is built using React.js, Node.js, and MongoDB, with AI technologies like TensorFlow.js to offer personalized recommendations. EquiLife aims to make health management simple, accessible, and effective for users looking to improve their overall well-being.

1997. EVENT EASE

Project Advisor	DR. M. ADNAN AZIZ
Status	In Process of Completion

Event Ease is a university event and society management system designed for the University of Central Punjab. It streamlines the task of organizing, managing, and communicating society-related activities through a web and mobile application. Utilizing the MERN stack for the web and React Native for mobile, it features real-time notifications, event registration, role-based access, and manual location check-in. It aims to replace the current manual process, improve efficiency, and boost student engagement.

1998. DIGITAL DIARY

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

The Digital Diary is a web-based platform aimed at improving communication and academic management in schools. The platform focuses on homework tracking, grade management, attendance monitoring, and facilitating communication between students, teachers, and parents. The project also integrates AI features to provide career path suggestions based on academic performance, offering a personalized experience for students. The proposed solution ultimately aims to create a collaborative and efficient educational environment.

1999. SMART SYSTEM FOR ANALYZING SENTIMENTS AND EMOTIONS IN CUSTOMER RESPONSES

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

The Smart System for Analyzing Sentiments and Emotions in Customer Responses is a cloud-based SaaS platform aimed at transforming how businesses collect, analyze, and interpret customer feedback. Traditional feedback mechanisms are heavily reliant on manual form creation and limited to textual analysis, which often overlooks emotional depth found in audio and video inputs. This project addresses the growing need for scalable, intelligent systems capable of processing multi-modal customer feedback—text, audio, and video—automatically generating insights using AI. By leveraging natural language processing (NLP), sentiment and tone analysis, and keyword extraction, the system delivers actionable summaries and visual reports via an intuitive admin dashboard. Knowledge areas include cloud computing, speech-to-text processing, emotion recognition, and scalable form generation through natural language input. The anticipated outcome is a dynamic, self-service platform that enhances customer experience analysis and supports informed decision-making for product and service improvements.

2000. PLACEHIVE

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

The "PlaceHive" project aims to simplify the relocation process for students and professionals moving to a new city for work, study, or business. It addresses challenges such as finding suitable accommodation, accessing reliable food quality ratings, navigating public transport, and tracking expenses. Unlike existing solutions that focus on single aspects like booking or budgeting, PlaceHive integrates accommodation search, meal reviews, transport routes, and expense tracking into a single platform.

Built using React, Node.js, Next.js (TypeScript), and MongoDB, it offers personalized recommendations, verified ratings, and a user-friendly interface to ensure a seamless, stress-free experience. The platform fosters transparency and competition among service providers, enhancing the quality of accommodations and meals, particularly for students in Pakistan.

2001. SMARTPOULTRY

Project Advisor	DR. NAUMAN MAZHAR
Status	In Process of Completion

SmartPoultry is a mobile-based AI and IoT-integrated system designed to improve broiler poultry farm management in Pakistan. It addresses key problems like poor disease detection, inefficient manual monitoring, and lack of automation. The system uses sensors for environmental tracking and machine learning for early disease diagnosis through waste analysis. It also manages feeding, vaccination, and inventory. The project applies knowledge from machine learning, embedded systems, mobile development, and cybersecurity. The expected result is a smarter, more efficient, and productive poultry farming.

2002. AI-POWERED ISLAMIC HERITAGE EXPLORER AND STORE

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

The ***AI-Powered Islamic Heritage Explorer and Store*** aims to revolutionize the digital representation of Islamic culture by integrating educational exploration with personalized e-commerce. Addressing the challenge of static and underrepresented Islamic historical content in current digital platforms, this project proposes an interactive web-based solution that leverages machine learning algorithms and the MERN stack for development. The platform enables users to explore Islamic heritage ranging from historical figures and cities while offering tailored product recommendations powered by machine learning algorithms.

By blending education with commerce, the project seeks to make Islamic culture more accessible and engaging to a global audience. Users will not only learn through dynamic content but also purchase culturally significant products that align with their interests. Key knowledge areas include full-stack web development, database management, machine learning, user experience design, and software engineering. The end result will be a scalable, user-centric platform that delivers a seamless, secure, and personalized

experience—contributing to the digital preservation and promotion of Islamic heritage in an innovative way.

2003. DELICACIES (AI-ENHANCED RECIPE WEBSITE WITH DYNAMIC FEATURES)

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

This project, "DELICACIES: AI-Enhanced Recipe Website," aims to create an intelligent web application that offers dynamic recipe generation, nutritional information, and dietary customization based on ingredients provided by the user. The AI-powered system enhances user experience by reducing food wastage and promoting healthy eating. It integrates ingredient substitution, a personalized recommendation engine, and a community blog. Furthermore, premade recipe videos enhance understanding and learning. Key knowledge areas include AI/ML, full-stack development, data management, and user experience design. The final product is an interactive, health-focused, and community-driven recipe platform.

2004. TRAFFIQUEST (GAMIFIED ROAD SAFETY AWARENESS PLATFORM)

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

Road traffic accidents are a major global issue, with human error contributing significantly to fatalities and injuries. In Pakistan, the lack of structured and engaging road safety education for drivers, cyclists, and pedestrians exacerbates the problem. **TraffiQuest** addresses this gap by offering a gamified, interactive platform designed to enhance road safety awareness. Using knowledge areas such as traffic rules, behavioral psychology, gamification techniques, augmented reality (AR), and mobile application development, TraffiQuest delivers learning modules, real-world traffic simulations, quizzes, and competitive leaderboards to promote user engagement and knowledge retention. The platform also provides practical tools such as a driving test center locator to assist users in real-life applications. By encouraging responsible road behavior through immersive and interactive learning, TraffiQuest aims to contribute to a measurable reduction in traffic accidents and foster a culture of safer road practices.

2005. CAREERCONNECT APP

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

2006. SIMPLIFYING GARDENING, ONE CLICK AT A TIME

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

The project titled “Simplifying Gardening, One Click at a Time” introduces an innovative, AI-powered mobile platform that aims to transform traditional gardening into a seamless, tech-driven experience. The application bridges the gap between plant enthusiasts, professional gardeners, and nursery vendors by integrating image recognition, and geolocation-based service discovery into a unified mobile solution.

Unlike general e-commerce platforms, this app is tailored specifically for the gardening community, enabling users to identify plants, find plants through nearby nurseries or vendors, and order tools or plants through a dedicated inventory system. Vendors can easily register and manage their digital store, while users can enjoy a smooth, intuitive interface for daily plant care. The platform prioritizes automation, personalization, and real-time interaction, thereby redefining the accessibility and efficiency of gardening practices in urban and suburban settings. With its AI integration and user-first design, the platform sets a new standard for sustainable and smart gardening.

2007. RECYCLINK

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

RecycLink is a smart AI-powered waste management platform designed to automate and optimize the recycling process for industries. It connects businesses generating industrial waste with the most suitable recycling companies through AI-based categorization and matchmaking. The project addresses the growing issue of industrial waste mismanagement and its impact on the environment. It combines software engineering principles, database systems, AI techniques, and web application development to create a functional product. The ultimate result is a streamlined, intelligent system that not only improves waste handling but also helps industries achieve sustainability goals with traceability, analytics, and CSR reporting.

2008. FUTURE PATH

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

The **Future Path** platform ensures students have access to the latest university admission details, including eligibility criteria, deadlines, and application processes for institutions . The **University Image Gallery** provides a visual representation of campuses through authentic images sourced from official university websites. The **Smart Filtering System** enables users to refine their search based on factors like program type, location, and tuition costs. By offering accurate information, the platform helps students make well-informed decisions about their higher education journey.

2009. CALTRACK

Project Advisor	MR. M. ZAHID HUSSAIN
Status	In Process of Completion

CALTRACK is a web-based AI-powered application designed to help users track their daily calorie intake and make informed dietary decisions. It addresses the growing problem of unhealthy eating habits and lack of nutrition awareness by offering an easy-to-use solution that combines automation, flexibility, and personalization. The system uses a Convolutional Neural Network (CNN) to recognize food items from

images and estimate their calorie content. For greater accessibility, it also supports manual food entry. It integrates data from third-party fitness apps to monitor calories burned, and provides personalized health insights and workout suggestions. Gamification elements such as streaks and tier levels are used to motivate users and encourage consistency. Key knowledge areas involved include machine learning (CNN, zero-shot learning), full-stack development (React.js, Django, MongoDB), cloud deployment, and API integration. The expected outcome is a responsive and intelligent platform that improves the way users manage their nutrition and fitness, making health tracking more accurate, engaging, and efficient.

2010. AI-EMPOWERED AGRI-TECH PLATFORM FOR FARMERS

Project Advisor	MR. M. ZAHID HUSSAIN
Status	In Process of Completion

This project proposes an AI-Empowered Agri-Tech Platform designed to assist farmers in diagnosing crop diseases, accessing real-time weather updates, and connecting with buyers through an integrated digital marketplace. The solution addresses the critical issue of limited technical support for small-scale farmers, which leads to poor crop yields and market inefficiencies. By leveraging machine learning, image processing, and real-time API integration, the system empowers users with timely, data-driven decisions. The platform emphasizes usability, local language support, and secure data handling to ensure accessibility and trust. The expected outcome is a scalable, intelligent system that enhances agricultural productivity and market access for rural communities.

2011. SWAPNSTYLE

Project Advisor	MR. M. ZAHID HUSSAIN
Status	In Process of Completion

SwapNStyle is a web-based platform aimed at promoting sustainable fashion by offering a space for clothing swaps, donations, and recycling. The platform addresses critical issues such as the growing problem of fashion waste, limited access to affordable clothing, and the environmental impact of fast fashion. Users can list their unwanted clothing items ranging from apparel to accessories and shoes and swap them with others based on preferences and item conditions, all while benefiting from an intuitive matching algorithm that optimizes for location and item quality.

The project leverages technologies such as React.js, Node.js, Express.js, MongoDB, and integration with third-party APIs like Twilio for verification and courier services for delivery. Knowledge areas including web development, database management, algorithms, and cloud deployment are utilized to ensure a scalable, secure, and user-friendly platform.

In addition to swapping, SwapNStyle integrates a donation system, where users can contribute clothes to verified charitable organizations. To incentivize participation, a reward system is incorporated, offering gift coupons for donations. The overall goal is to reduce textile waste, support social equality, and offer users an affordable way to refresh their wardrobes without relying on financial transactions.

Upon successful implementation, SwapNStyle is expected to offer an efficient, trustworthy, and scalable solution that bridges the gap between fashion waste and clothing scarcity, creating a positive environmental and social impact.

2012. STUDY MENTOR SYSTEM

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

The Study Mentor System is designed to help 8th-grade students (who are going to study pre 9th) choose their academic domain based on their interests and subject performance. Many students select a domain without proper research, relying on advice that often does not match their strengths. This system collects student data, including core subject marks and interests, to recommend the most suitable domain, such as Computer Science, Biology, or Accounting.

Along with domain recommendations, the system provides information on future study programs, admission criteria, institutions, and career scope. It also connects students with study consultants and displays consultant ratings for better decision-making.

The system aims to provide a structured, research-based approach, ensuring students make informed academic choices that align with their strengths and future goals.

2013. DREAM HOSTER

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Planning events is a stressful and time-consuming process. Many individuals and teams struggle with common challenges such as lack of personalization, poor budget management, limited tools for collaboration, and the hassle of finding reliable venues and vendors. These issues often result in disorganized workflows, missed deadlines, and an overall lack of satisfaction with the final event.

Dream Hoster is an innovative, AI-powered event management platform built to solve these challenges and enhance the planning experience. The platform simplifies event organization by offering AI-driven recommendations, real-time collaboration tools, a dynamic budget planner, and a vendor rating system—all in one seamless interface.

With advanced web technologies and secure authentication mechanisms, Dream Hoster provides a reliable and interactive solution tailored to the needs of modern users. Customizable event templates help streamline planning for weddings, birthdays, corporate functions, and more. Users can communicate directly with vendors, track event progress, and receive smart alerts to stay on schedule.

A central dashboard allows users to manage all aspects of their event from one place, making the process more organized and efficient. The platform also supports multi-user access, enabling families or teams to collaborate in real time. As users engage with the platform, Dream Hoster's AI learns from their preferences and feedback, delivering increasingly personalized suggestions for future planning.

In short, Dream Hoster transforms the often overwhelming task of event planning into a smooth, personalized, and collaborative experience.

2014. JOURNEY THROUGH PAKISTAN (JTP)

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Journey Through Pakistan (JTP) is an interactive tourism platform designed to modernize and promote travel within Pakistan by addressing the lack of reliable, localized, and interactive travel information. Despite Pakistan's rich cultural heritage and

scenic locations, tourism remains underdeveloped due to insufficient access to trustworthy information and limited engagement between travelers and local communities. This project tackles the problem by creating a digital platform that offers real-time navigation, **personalized recommendations**, and AI-driven **image recognition of landmarks**. The solution will empower tourists to explore lesser-known destinations while enabling locals to contribute insights, fostering cultural exchange and community involvement. The expected outcome is a cross-platform application that enhances the travel experience, **promotes Pakistan's cultural heritage**, and supports economic growth through sustainable tourism.

2015. LOAD BOARD SYSTEM

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

The Load Board System is a web-based platform aimed at solving inefficiencies in the U.S. trucking industry by connecting shippers, brokers, dispatchers, and truck drivers more effectively. The existing solutions like DAT and Truckstop are costly and outdated. This system provides features such as AI-powered load recommendations, live bidding, and real-time tracking, ultimately enhancing operational efficiency and reducing costs for logistics professionals.

2016. GAMING COMMUNITY APPLICATION (GAMER-HIVE)

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Gaming is not a hobby, it is a lifestyle. Gamer-hive is a home for gamers. It will break barriers and create opportunities for all gamers. It will provide gamers a positive environment ensures that every gamer feels valued and empowered. The platform encourages positive discussions, knowledge sharing and skill development, making it easier for players to improve their gameplay.

2017. FUTURESCOPE: A DECISION MAKING SIMULATOR

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

FutureScope: A Decision-Making Simulator is an innovative MERN Stack-based web application designed to modernize and enhance the recruitment and career transition processes. Traditional recruitment methods, including interviews and aptitude tests, often fail to comprehensively evaluate a candidate's real-world decision-making abilities. Similarly, when professionals consider swapping roles across organizations, there exists no reliable or data-driven mechanism to ensure the mutual benefit of such transitions. FutureScope aims to address these challenges by offering recruiters an interactive platform to assess candidates using job-specific, gamified simulations that mimic workplace scenarios. The platform also introduces a unique "Candidate Swap" feature, allowing companies to evaluate and exchange employees based on objective performance data. Integrated analytics and reporting tools provide detailed insights into each candidate's strengths, weaknesses, and behavioral patterns. Additional features such as an

AI-powered resume builder, user profile management, and a secure company collaboration portal further streamline the hiring and swapping processes. By promoting fairness, accuracy, and transparency, FutureScope redefines decision-making assessments and sets a new standard for intelligent hiring.

2018. QUICKBIT: REACT NATIVE APPLICATION

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

In today's interconnected world, internet access is a cornerstone of communication. However, there are numerous regions and scenarios where internet connectivity is unavailable or unreliable, leaving individuals and organizations unable to share critical information effectively. This digital divide is particularly evident in remote areas, during natural disasters, and in certain industrial setups where network infrastructure is either insufficient or impractical. Traditional methods like Bluetooth, NFC, or SMS are often constrained by proximity, limited range, or lack of automation. Additionally, SMS-based solutions tend to be insecure and lack mechanisms for data encoding or error correction. This creates a pressing need for an alternative communication tool that is not only independent of the internet but also secure, efficient, and user-friendly. Solving this problem would provide a vital communication bridge, enabling seamless data exchange in low-connectivity environments, thereby addressing critical gaps in accessibility and reliability. QuickBit is a mobile application built using React Native, designed for offline data transmission through SMS. It allows users to send data securely without internet by encoding the information into binary format, encrypting it, and sending it through SMS. On the receiver's end, the app captures the message automatically, decrypts it, and presents it in a readable format. This project aims to solve the problem of data communication in low-connectivity areas by providing a seamless and secure offline communication method.

2019. URBAN CRAWLER: AI CRAWLER FOR REAL ESTATE BUSINESS

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

The Urban Crawler project aims to revolutionize property search by addressing the fragmentation and inefficiencies in the real estate market. It offers a centralized platform that autonomously crawls rental property listings from multiple online sources and aggregates them into a single, user-friendly system. Unlike traditional platforms, Urban Crawler uses AI-powered search that allow users to input natural language queries—such as "I want a 3-bedroom house in Lahore within Rs. 50,000" and receive intelligent, highly relevant property suggestions. Our project solves the problem of scattered rental listings by automatically crawling and combining data from multiple Lahore websites. This matters because hunting across many sites wastes time and can cause users to miss good options. We use web-crawling, AI, and cloud technologies to gather, clean, and rank listings. The result is a simple platform that shows up-to-date properties and sends alerts when new matches appear.

2020. INSTANT OFFERS-AI: AI ENABLED SALES PROMOTER WEB PORTAL

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

Instant Offers-AI is a smart web portal made to improve how sales promotions work. It collects real-time sales data from different brands and helps users find the best offers quickly and easily. The system gathers this data in two ways: it uses web crawlers (automatic tools) to fetch offers from brand websites, and it also allows brand representatives to manually add their sales data. This makes sure that the system has up-to-date and complete information.

This project solves common problems like not knowing about current promotions, finding it hard to search for deals, and wasting time browsing different websites. With the help of AI and modern web development, Instant Offers-AI gives users a simple and smart way to see personalized and timely offers. The platform is useful for both users and businesses. Customers get better access to real-time deals, and brands get helpful insights into what users are interested in. Once finished, Instant Offers-AI can become an important tool for shoppers and brands, making the shopping and selling process faster and more connected.

2021. UPSKILLPRO: IDENTIFYING SKILL GAPS AND EMPOWERING LEARNING JOURNEY

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

In today's competitive job market, individuals often struggle to identify their skill gaps and find the right resources to improve them. Moreover, companies face challenges in upskilling their workforce and ensuring that employees possess the right competencies. The problem lies in the lack of personalized tools that can accurately assess skills, identify areas of improvement, and recommend targeted learning resources. The *UpSkillPro* aims to address this problem by offering an AI-powered solution that evaluates the skills of users through personalized assessments and provides tailored recommendations for online courses, certifications, and learning resources. The methodology involves adaptive skill assessments, skill gap analysis, and integration with online course providers such as Coursera, Udemy, and LinkedIn Learning. By leveraging AI algorithms for recommendation systems and dynamic learning paths, the tool ensures that users receive the most relevant and effective resources to enhance their skills. The development of the system follows an SDLC-based approach, ensuring its scalability, reliability, and user-centric design.

2022. CONNECT-PHARMA (FIND YOUR MEDICINE FAST AND EASY)

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Connect-Pharma is a mobile-based solution designed to address the challenge of locating medicines across pharmacies without relying on centralized inventory systems and visiting them individually. The application initiates a real-time search by notifying

registered pharmacists within a specified radius to confirm medicine availability. Based on responses, users are presented with confirmed options (where the required medicine is available) and may choose either doorstep delivery or in-person collection. If no availability is found, the system expands the search radius iteratively and if still medicine is not found then it ultimately employs AI to suggest alternative medications. User can add reminders according to their medicine taking time and user can upload its medical records in the form of images, pdf or word file which will help user in easy access to their medical records.

The expected outcome is a seamless, responsive platform that enhances medicine accessibility, reduces search time, and improves the overall healthcare support experience for users.

2023. DOLPHIN SPLASH: A GAMIFIED CRYPTO MINING APP

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Dolphin Splash is a mobile and web application that makes cryptocurrency mining fun and engaging through gamification. The app allows users to earn Dolphin Tokens by completing simple in-game challenges. It simplifies the complex world of crypto mining, making it accessible to everyone, even non-technical users. It will include core blockchain features, gamified UI, secure transactions, and educational components.

2024. FIRSTCALL: CONNECTING TO EMERGENCY SERVICES

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

FirstCall is a cross-platform emergency response mobile application aimed at bridging the gap between citizens and critical services such as ambulances, police, and fire departments — particularly in regions of Pakistan with poor or unreliable internet connectivity. The application is developed using **Flutter** to ensure compatibility across Android and iOS devices and utilizes **SQL** and **ROOM API** for offline data storage and synchronization.

In urgent situations where time and accuracy are critical, FirstCall enables users to request emergency assistance with a single tap. The app automatically shares the user's live location with the appropriate emergency service provider and, in case of no internet availability, sends essential information via **SMS** to ensure help is dispatched without delay.

The system also offers **request status updates**, **real-time tracking**, and a **minimal user interface** designed for ease-of-use under stress. By integrating multiple emergency services into one platform and ensuring functionality even in disconnected environments, FirstCall significantly improves the speed, accuracy, and accessibility of emergency responses.

This project addresses a vital public need and aims to deliver a life-saving solution with real-world impact, especially for **rural and underserved communities**. It combines technical innovation with social responsibility, offering a reliable, efficient, and scalable emergency response solution.

2025. PETCAREPLANET.NET

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

PetCarePlanet is a comprehensive web-based platform designed to revolutionize pet care management, veterinary support, and ethical pet trading. The project addresses the growing challenges faced by pet owners and service providers in accessing trustworthy and timely pet-related services. The significance of this platform lies in its ability to centralize various aspects of pet care—including veterinary consultations, adoption processes, service bookings, and health records—into a user-friendly digital ecosystem. Key knowledge areas applied in this project include web development (Laravel for backend, Vue.js for frontend), relational database management (MySQL), user experience design, and secure data handling. The system enables users to connect with verified veterinary professionals, find ethically listed pets for adoption or purchase, and manage pet health records efficiently. Upon completion, the project aims to provide a robust, scalable, and secure solution that enhances pet well-being, streamlines service delivery, and fosters a responsible pet care community.

2026. ESTATEEXPERT: MODERN REAL ESTATE AT YOUR FINGERTIPS

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

EstateXpert addresses the lack of transparency, security, and accessibility in the Pakistani real estate market by providing a unified mobile-first platform with real-time auctions, group-buying, community insights, interactive price trends, and secure payments. Leveraging Flutter for cross-platform mobile development, NestJS for a robust backend, MongoDB for flexible data storage, and Firebase for authentication, EstateXpert will empower users—buyers, sellers, and investors—with actionable insights and seamless workflows.

2027. SPORTIFY

Project Advisor	MR. USMAN AKBAR
Status	In Process of Completion

2028. MAPPIFY

Project Advisor	MR. USMAN AKBAR
Status	In Process of Completion

Mappify is an innovative web-based Software as a Service (SaaS) platform designed to redefine the way users engage with multi story commercial and residential properties. It offers a real time 3D mapping experience enabling both property developers and end users to interact with buildings and individual units through dynamic floor navigation, realistic and easy to use controls. The platform bridges the gap between traditional property showcasing methods and modern digital expectations by allowing users to explore buildings in a virtual environment, view detailed specifications and reserve or

purchase property units all through a highly responsive and interactive web interface. Mappify centralizes the entire property engagement process by offering digital floor plans, live unit availability, and secure online payment features. From a developers perspective Mappify serves as a robust tool for managing inventory updating unit data in real time and engaging customers more effectively. For buyers it transforms the typically fragmented property hunting journey into a smooth and informed experience. Whether its navigating through a shopping plaza, renting an office or buying an apartment Mappify makes the entire process faster, smarter, and more user-centric.

2029. INTERACTIVE SUPPORT AND EMOTIONAL INSIGHTS FOR CHILDREN WITH AUTISM SPECTRUM DISORDER

Project Advisor	MR. ZAIN ASGHAR
Status	In Process of Completion

Children with Autism and Autism Spectrum Disorder (ASD) often struggle with expressing emotions and social interaction. Parents and doctors also face difficulties in monitoring their progress effectively. Our project addresses these challenges by developing an easy-to-use website that supports both children and their families. To ensure usability, we are applying methods like user-centered design, testing, and feedback-driven improvements.

The platform will offer a secure social space for children to build social skills, along with dedicated portals for families and healthcare providers to share progress and receive real-time updates.

A standout feature is our mood detection tool, which interprets facial expressions and body language. We aim to improve its accuracy by **25%** over current models to better support emotional awareness and self-regulation.

By integrating web development, psychology, and machine learning, we plan to create a supportive and efficient platform. We also aim to reduce parental burden by **35%** through features like automated progress tracking, tailored activity suggestions, and built-in communication with professionals ultimately improving the quality of life for children with ASD and their caregivers.

2030. INVESTMATE NEXUS

Project Advisor	MR. ZAIN ASGHAR
Status	In Process of Completion

Investmate Nexus is an online platform that helps bring together **entrepreneurs** who have great business ideas and **investors** who are looking for good projects to support. Many people with creative business ideas cannot find investors, and many investors struggle to find ideas that match their interests. Investmate Nexus solves this problem by using smart technology to **suggest good business ideas to investors** and helps entrepreneurs **showcase their projects**.

The platform allows investors to **manage their investments, check risks, and communicate directly** with entrepreneurs through **messages and video calls**. Entrepreneurs can also **validate their business ideas** to increase their chances of getting funded. All payments and data are **securely handled** to make sure everything is safe and trustworthy.

Investmate Nexus makes it easy for both sides to connect, talk, and make smart business decisions together, opening up more opportunities for growth and success. The platform is built using Java for backend, Python for AI-based recommendations, and MySQL for database management.

2031. ASSETLOOP

Project Advisor	MS. RUBAB JAVAID
Status	In Process of Completion

AssetLoop is a smart and easy-to-use peer-to-peer (P2P) rental platform that helps people and businesses rent or lease different types of items, such as office spaces, homes, vehicles, tools, electronics, and equipment. It is specially designed for the Pakistani market, where many people face problems finding affordable short-term rentals or earning money from items they don't use often. AssetLoop allows users to list their items, set prices, and rent them out safely and easily. Key features include real-time availability, secure payments, user verification. Users can also chat directly through the platform to discuss details before renting.

The platform is built using modern web technologies (React.js, Node.js, Express.js, and MongoDB) and hosted on cloud services like AWS or Microsoft Azure to ensure fast performance and easy scaling. AssetLoop has separate dashboards for renters and owners, a smart pricing system based on demand and item condition, and tools for rating and reviewing users to build trust. By helping people rent instead of buy, it promotes the idea of shared resources, reduces waste, and supports extra income opportunities. AssetLoop is not only a solution for today's rental needs but also a step toward building a more affordable and sustainable economy in Pakistan.

2032. VOICE CONTROLLER WEB APPLICATION

Project Advisor	MS. RUBAB JAVAID
Status	In Process of Completion

2033. INVIGILEYE

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

InvigilEye is an AI-powered invigilation system for physical examinations. It enhances exam integrity and fairness through facial recognition for automated attendance and unauthorized face detection, posing estimation to flag suspicious behavior and instant alert to invigilators. The system will also be able to save snapshots (visual evidence) for post exam reports, while admins will be able to configure exam parameters (e.g., venues, students' data etc.) and be able to download report. InvigilEye reduces 70-80% of manual workload by applying ML models and integrating cameras with desktop interface, ensures unbiased monitoring and provides insights-modernizing exam security from student authentication to detailed reporting.

2034. CBC-EXPERT: AI-POWERED DISEASE DETECTION USING WBC, RBC, AND PLATELET COUNTS

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

CBC-Expert: AI-Powered Disease Detection Using WBC, RBC, and Platelet Count is a advanced system designed to revolutionize laboratory workflows. By using artificial intelligence, this project focuses on analyzing White Blood Cells (WBC), Red Blood Cells (RBC), and platelet counts to detect diseases like anemia, leukemia and viral infections. The system addresses the current challenges of time-consuming manual analysis, limited integration with lab systems, and privacy concerns. This project ensures data security while deploying a systematic interface in laboratories, making disease detection accessible, efficient, and secure.

2035. MACROMATE

Project Advisor	MS. SAIRA LATIF
Status	In Process of Completion

Many individuals struggle to maintain their fitness and nutrition goals due to the rigidity and complexity of existing health tracking apps. These apps often demand manual data entry, provide generic advice, and fail to adapt to dynamic lifestyle factors such as weight fluctuations, sleep patterns, stress levels, and activity changes [1]. **MacroMate** is a cross-platform mobile app for Android and iOS that addresses these challenges through **artificial intelligence (AI)**. AI enables real-time personalization by dynamically adjusting calorie and macronutrient goals based on user data like weight, sleep, stress, and activity levels [4]. Additionally, AI-powered food recognition allows users to log meals effortlessly by taking photos, reducing the time and stress of manual tracking. With features like personalized workout plans, cheat meal adjustments, and an intuitive interface, MacroMate aims to be a user-friendly, adaptive health companion that fosters sustainable progress toward fitness goals.

This project integrates AI, mobile app development, and user-centric design to deliver a seamless, engaging tool that empowers users to achieve lasting health improvements.

2036. SMART PARKING LOT SYSTEM FOR URBAN TRAFFIC OPTIMIZATION

Project Advisor	MS. SIDRA NOUREEN
Status	In Process of Completion

The Smart Parking Lot System is an innovative solution to the increasing issue of parking scarcity in urban areas, driven by the rising number of vehicles and limited parking infrastructure. The project integrates IoT technology, AI-driven analytics, and location-based services into a mobile app to offer real-time parking space availability, navigation assistance, and dynamic parking suggestions based on factors such as vehicle type, demand, and location. This system aims to alleviate traffic congestion and reduce environmental pollution by enabling efficient parking management.

Through real-time data, predictive analytics, and user-centered design, the project will improve urban parking experience, reduce congestion, and contribute to smarter urban planning.

2037. PHYSIOCARE+

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

PhysioCare+ is an AI and AR-driven mobile application designed to revolutionize physiotherapy by offering personalized rehabilitation plans, real-time motion tracking via PoseNet, and secure in-home therapist booking. The app features a 3D avatar system for pain mapping, multilingual support, and encrypted data storage, addressing accessibility and safety gaps in traditional physiotherapy.

2038. INTERACTIVE 3D ROOM DESIGNER WITH VIDEO INPUT AND OBJECT PLACEMENT

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

2039. HARMONIHEALTH

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

2040. DEVMENTORAI: EMPOWERING DEVELOPERS WITH AI-DRIVEN REAL-WORLD SOFTWARE PRACTICES

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

In recent years, there has been a significant increase in the number of software engineering students and early-career developers who initiate side projects but struggle to complete them. The lack of structure, real-world pressure, and ongoing mentorship often leads to abandoned codebases and lost learning opportunities. This project proposes the development of an AI-driven platform that simulates a hyper-realistic software development environment. The platform introduces virtual AI clients with evolving requirements, AI senior developers who provide feedback, and dynamic challenges such as unexpected bugs or shifting deadlines—mimicking the conditions of real software teams and companies.

The aim is to create an engaging and educational experience that improves technical skills, project management, and resilience by placing users in situations that resemble real-world workflows. Key knowledge areas involved in this project include artificial intelligence, natural language processing, software engineering principles, human-computer interaction, and full-stack development. The expected result is a prototype platform that not only supports the user in completing projects but also enhances their

confidence and readiness for professional environments. By validating the idea through surveys and user feedback, the project will assess the actual need for such a solution and its potential impact on software development education.

2041. CLUE CHRONICLES: SHADOWS OF JUSTICE

Project Advisor	MS. ZUPASH AWAIS
Status	In Process of Completion

Clue Chronicles: Shadows of Justice is a multiplayer 3D mystery game where two players collaborate to solve complex crime cases. The players assume the roles of a **Detective** and a **Forensic Analyst**, working together to investigate and uncover hidden truths. The game uses **realistic forensic techniques** and investigative methods, allowing players to experience the process of crime-solving through **evidence collection, forensic analysis, and psychological profiling**. This project addresses the lack of cooperative detective games by providing a multiplayer experience that emphasizes teamwork and problem-solving.

S25-BSDS

2042. ESPERFLOW

Project Advisor	MS. SUMRA FAYYAZ
Status	In Process of Completion

Esper Flow aims to revolutionize the blood donation process by leveraging Artificial Intelligence (AI), Data Science, and Machine Learning to create an intelligent and automated system that addresses the inefficiencies in traditional blood donation systems. The system will maintain a comprehensive database of donor and recipient details to enable real-time donor-recipient matching, predict blood demand using forecasting models, and ensure secure, verified donation processes.

According to the World Health Organization (WHO), over 118.5 million blood donations are collected globally each year, yet many countries still face acute shortages due to delays in identifying and contacting donors. Traditional blood donation systems suffer from the absence of a centralized system, forcing patients and their families to rely on phone calls, social media appeals, or personal networks, which can delay the availability of critical blood supply by hours or even days. Studies reveal that nearly 20% of blood requests in emergencies go unmet due to the lack of automation and organized systems.

2043. NAVED (SMART CAMPUS NAVIGATION AND ASSISTANCE SYSTEM)

Project Advisor	MR. SYED SAQLAIN HAIDER
Status	In Process of Completion

Naved is a smart, AI-powered navigation and campus assistance system designed to transform the traditional university experience into a seamless, intelligent, and accessible environment. The system integrates multiple advanced technologies, including a 3D model-based navigation module, real-time parking assistance, license plate recognition

(LPR) for vehicle tracking, and an AI-driven academic assistant chatbot. It further supports a student collaboration hub, smart library portal, personalized academic alerts, and campus event notifications, all within a unified digital platform.

Naved aims to solve common problems faced by students, faculty, and visitors on large campuses such as difficulty in locating buildings, managing parking, staying informed about academic schedules, and finding relevant resources. Through the use of artificial intelligence, real-time data processing, and user-centric design, the system enhances usability, promotes engagement, and ensures inclusivity via accessibility features.

The project draws on interdisciplinary knowledge areas including AI, computer vision, software engineering, and user experience design. The outcome is expected to be a robust, scalable solution that can be customized for deployment across various educational institutions, setting a new standard for smart campus systems.

F25-BSCS

2044. SECUREGUARD PRO: AI-DRIVEN VULNERABILITY DETECTION

Project Advisor	DR. ABBAS KHALID
Status	In Process of Completion

This project will build a web platform that uses Artificial Intelligence to find vulnerability and security holes in code that developers sometimes miss. We will focus only on function-level flaws, exposure of personal data (PII), SQL injection, Cross-Site Scripting (XSS), weak passwords, and memory leaks. The platform helps developers catch small mistakes that could cause attacks, big errors, or data leaks in production. In the future, the platform can evolve to support multi-language code scanning and analyze Docker images for deeper security insights.

2045. SMART TIMETABLE SCHEDULER FOR FOIT

Project Advisor	DR. ABBAS KHALID
Status	In Process of Completion

An intelligent JavaFX-based system that automates timetable creation for FOIT by applying constraint satisfaction algorithms to ensure conflict-free scheduling of teachers, rooms, and subjects while maintaining flexibility and accuracy.

2046. AI-POWERED VIDEO GENERATION PLATFORM UING MANIM

Project Advisor	DR. AHMAD SHABBAR KAZMI
Status	In Process of Completion

This project is AI project on web-based platform where it uses artificial intelligence to generate educational explainer videos based on natural language prompts. The system will use the manim animation library to convert the user input into the python scripts that will allow the non-technical users like students or teachers to create the professional-quality animations without using code or need to have any coding skills. The platform features a simple workflow: prompt input, script generation using AI, video rendering, previewing, and optional scene stitching. It targets subjects such as mathematics and

Computer Science, with the purpose of making the learning way easy through visual video playing technique.

2047. PERSONALIZED AI AVATAR USING GENERATIVE CLONING

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

This project aims to develop a personalized AI avatar that can replicate a person's communication style, tone, and behavior using generative cloning. The main concept behind this project is to design a digital version of an individual that can engage in interactive and meaningful conversations while reflecting their unique personality traits. The system gathers input data from the user, such as text, voice, and communication patterns, and processes it through an intelligent model capable of understanding and mimicking their natural way of expression. By learning from consistent patterns in speech and behavior, the avatar can respond in a manner that feels familiar and uniquely tailored to the user it represents.

2048. MACHINE LEARNING BASED RESTAURANT HYGIENE RECOMMENDER APP

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

This project aims to build a mobile application that recommends restaurants based on hygiene standards and user ratings using machine learning algorithms. Unlike traditional recommender systems that focus solely on food quality or popularity, this app prioritizes health and safety by analyzing hygiene data, customer reviews, and government inspection records (if available). Users can search and view hygiene ratings, report cleanliness issues, and get personalized suggestions based on cleanliness history and public sentiment. This approach empowers users to make safer dining choices and promotes better health awareness .

2049. FITAVATAR

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

FitAvatar is an AI-powered fitness assistant that integrates computer vision, posture correction, and personalized context-aware diet recommendations. The system leverages MediaPipe Pose to detect human body landmarks in real time using a smartphone camera. Unlike typical fitness apps, FitAvatar provides instant voice feedback and an avatar demonstration to guide the user during exercise. The architecture follows a web-first approach: the AI model and pose detection logic are deployed on a web backend (Flask/FastAPI), exposed via REST APIs. The mobile app frontend captures camera frames, sends them to the backend, and displays feedback. Additionally, a context-aware diet recommender generates practical diet plans based on user BMI, fitness goals, and environmental factors. This makes FitAvatar more accessible, interactive, and impactful than generic fitness apps.

2050. CYGUARDIAN-X: BASED ON INTRUSION DETECTION AND PREVENTION SYSTEMS

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

Cybersecurity has emerged as a critical challenge in the digital era, with threats becoming increasingly frequent and sophisticated, often bypassing traditional defenses such as firewalls and antivirus systems. To address these limitations, this project proposes CyGuardian-X, a hybrid Intrusion Detection and Prevention System (IDPS) that integrates conventional rule-based mechanisms with modern artificial intelligence techniques. The architecture comprises two modules: ShieldNet, which employs signature and rule-based detection using tools such as Snort and Suricata, and DeepDefend, which utilizes deep learning models including Convolutional Neural Networks (CNNs) and Long Short-Term Memory (LSTM) networks for anomaly detection. By combining these complementary approaches, CyGuardian-X aims to achieve accurate detection of both known and unknown threats, reduce false positives, and provide real-time monitoring with automated response capabilities. The system is designed to deliver a scalable and intelligent security solution applicable to both academic research and enterprise environments.

2051. APPLE METAL-POWERED LLM MARKETPLACE WITH MCP SERVER SUPPORT FOR MACOS DEVELOPERS

Project Advisor	DR. GHULAM MUSTAFA
Status	In Process of Completion

We propose to develop a next-generation LLM Marketplace and MCP Server/Framework (open source) that enables any MacOS developer to easily access, deploy, and monetize Large Language Models (LLMs) running efficiently on Apple Silicon (via Apple Metal). The platform will also fully support MCP Protocol, ensuring secure, native, and extensible integration for MacOS applications and LLM inference.

2052. REAL-TIME ACTION RECOGNITION FOR SUSPICIOUS BEHAVIOR DETECTION IN RETAIL ENVIRONMENT

Project Advisor	DR. IRFAN ANJUM
Status	In Process of Completion

An AI-based real-time surveillance system that detects suspicious activities in retail stores using YOLOv8 and YOWOv3. It identifies actions like concealment or loitering from CCTV feeds and sends instant alerts while ensuring privacy through pose or face anonymization.

2053. SMARTBITE: HOMEMADE MEAL DELIVERY NETWORK

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

SmartBite is a web-and-mobile platform designed to connect home-based chefs with customers seeking hygienic, affordable, and customizable homemade meals. The system bridges the gap between small-scale food vendors and urban customers by integrating them into a transparent and reliable meal supply chain. For customers, SmartBite offers features such as meal customization, scheduled pre-ordering, secure online payments, and real-time order and rider tracking. The project focuses on developing a clear, semester-feasible MVP (Minimum Viable Product) that ensures both functionality and scalability. It utilizes a full stack development approach with Next.js, React Native, Node.js, Django, and MongoDB to deliver a smooth, secure, and efficient homemade food delivery experience.

2054. TRAPOS: AI-POWERED DECEPTIVE HONEYPOD SYSTEM WITH FEDERATED THREAT INTELLIGENCE

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

TrapOS is an AI-driven, containerized deception-based cybersecurity platform that detects and classifies cyber threats in real time. It deploys intelligent honeypots to lure attackers and logs their behavior, which is analyzed using machine learning models trained on benchmark datasets. An LLM-based engine generates human-readable summaries, while a federated learning module enables multiple TrapOS nodes to collaboratively train models without sharing raw data. The system automates firewall defense, generates decoy files, and provides real-time visual analytics through a secure web dashboard.

2055. DECENTRALIZED ZAKAT MANAGEMENT USING BLOCK-CHAIN FOR TRANSPARENT DISTRIBUTION

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

Zakat is one of the central pillars of Islam, aimed at reducing poverty and promoting social welfare. Yet, existing zakat systems face significant issues such as mismanagement, lack of transparency, and absence of accountability, leading to donor mistrust and inefficient distribution of funds. This project proposes a blockchain-based decentralized zakat management system to ensure transparent, traceable, and Shariah-compliant distribution of funds. By leveraging Ethereum/Polygon, Solidity for smart contracts, Web3.js, Node.js/Express, MongoDB, React.js, MetaMask, and IPFS, the system automates zakat calculation, donor onboarding, beneficiary verification, and real-time fund tracking. The results expected include improved accountability, enhanced donor trust, reduced operational costs, and scalable adoption across different regions. This project integrates knowledge from blockchain, web development, databases, and Islamic finance principles to deliver a secure, auditable, and impactful zakat management platform.

2056. YOLOCHECK: FAST AND ACCURATE MOLE DETECTION

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

YoloCheck is an advanced machine learning-based tool designed for the fast and accurate detection of moles in medical imaging, particularly skin lesions. Leveraging the power of YOLO (You Only Look Once) object detection, YoloCheck enables real-time, high-precision identification of moles from images, aiding in early detection and diagnosis of skin cancer. By training the model on a large dataset of labeled images, YoloCheck provides a robust, scalable solution for clinicians to assess the potential malignancy of moles with greater efficiency and reliability. The system is designed to be user-friendly, with an intuitive interface that allows for seamless integration into existing healthcare workflows. This project aims to significantly improve the accuracy and speed of mole detection, supporting better patient outcomes and reducing the burden on healthcare professionals.

2057. VOCALDOC: AI-BASED VOICE CALL ASSISTANT FOR DOCTOR APPOINTMENT SCHEDULING

Project Advisor	DR. RABIA TEHSEEN
Status	In Process of Completion

VocalDoc is an AI-Based Voice Call Assistant for Doctor Appointment Scheduling, aims to automate appointment management through traditional phone calls without requiring internet or smartphones. Using speech-to-text, natural language understanding, and text-to-speech, the system will recognize patient intent, schedule appointments, and send SMS confirmations. A backend with real-time calendar integration ensures secure booking and prevents conflicts, while an admin dashboard and doctor-facing app provide analytics and management tools. By combining AI, NLP, and cloud technologies, the solution enhances accessibility for underserved populations and reduces administrative workload in healthcare.

2058. RAHNUMA

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

Rahnuma is a web-based platform offering personalized career guidance for final-year students and recent graduates. It bridges the academic-to-professional gap by using cognitive aptitude and Big Five (OCEAN) personality assessments to power a hybrid recommendation engine for tailored career paths. Rahnuma also includes a specialized resume builder and an ATS score checker to ensure job application readiness and boost success.

2059. AIRTOXX: INTELLIGENT MULTI-GAS MONITORING AND ALERT SYSTEM FOR INDUSTRIAL ENFORCEMENT

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

ABSTRACT: AirToxX is an IoT and AI-based air quality monitoring and enforcement system that detects, predicts, and alerts for harmful gas levels in real time. It collects data from sensors (MQ135, CCS811, PMS5003, DHT22), validates readings using public AQI APIs, and applies an XGBoost machine learning model for pollution prediction. When pollution exceeds safety limits, automated alerts and fine logs are generated. A web dashboard and mobile app enable users and authorities to take timely action to reduce the pollution level in the atmosphere which may be harmful for living beings.

2060. HAULR: SMART TRUCKING AND LOGISTICS ESTIMATOR WITH AI-POWERED LOAD DETECTION

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

The logistics and trucking industry in Pakistan faces severe inefficiencies due to manual booking processes, inaccurate load estimations, and a lack of transparency in pricing. Haulr aims to resolve these issues through an AI-powered mobile application that automates freight matching and enhances efficiency. The system enables users to upload photos of goods, after which AI algorithms estimate weight and dimensions and recommend the most suitable truck type automatically. Drivers receive real-time job notifications, allowing them to bid competitively and provide transparent pricing. Features such as GPS-based real-time tracking, QR-coded digital shipment logs, an AI-driven Urdu chatbot, and truck-sharing/load-pooling mechanisms make Haulr a smart, user-friendly, and efficient logistics platform. By integrating machine learning, computer vision, and mobile application development, Haulr bridges the gap between manual freight operations and intelligent logistics management.

2061. ECOSCOUT: SMART VEHICLE LITTERING & SMOKE EMISSION DETECTION SYSTEM

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

EcoScout is an AI-powered video analytics system designed to detect environmental violations by vehicles — such as littering and excessive smoke emissions — using CCTV, drone, or uploaded video footage. The system applies deep learning for object and action detection, along with license plate recognition for vehicle traceability. Detected events are logged with visual evidence, timestamps, and vehicle identifiers. A centralized web dashboard enables authorities to review and export reports, supporting environmental enforcement and compliance on highways and motorways.

2062. NEURO-THERAPY COMPANION

Project Advisor	DR. SAIRA ANDLEEB GILLANI
Status	In Process of Completion

Neuro-Therapy Companion is a web-based platform that integrates Wysa AI with EEG device data to provide personalized neurotherapy. It detects whether users are depressed, non-depressed, stressed, or not stressed, and offers AI-guided therapeutic support to improve emotional well-being.

2063. BRIDGE MATE: A ROBOT COMPANION FOR REMOTE SOCIAL ENGAGEMENT

Project Advisor	DR. SYED TANWEER SHAH BUKHARI
Status	In Process of Completion

This project presents Bridge Mate, a semi-autonomous telepresence robot designed to facilitate remote social engagement through physical and cognitive interaction. Equipped with a high resolution camera, and adaptive gripper, the robot enables users such as elderly individuals or children with ASD to engage in shared activities and games remotely. The system integrates computer vision, telepresence control, and cognitive reasoning to recognize, manipulate, and respond intelligently during tasks, fostering meaningful connections and reducing social isolation.

2064. SIMULATION BASED EMERGENCY CLINICAL TRAINING (EXTENSION TO VR-ENHANCED HEALTHCARE)

Project Advisor	DR. SYED TANWEER SHAH BUKHARI
Status	In Process of Completion

In many developing regions, especially rural areas, access to quality medical education and training resources remains limited. Traditional learning methods often rely on physical models, human interaction, or real-life practice, which can be both risky and resource-intensive. This project proposes an innovative solution using Virtual Reality (VR) to enhance medical education and training. Our system, design specifically for medical students and trainees, leverages the Meta Quest VR headset to provide immersive, interactive 3D simulation of medical procedures and human anatomy. By replacing early-stage human interaction with realistic VR environments, the project aims to minimize the risk of medical errors, enhance conceptual understanding, and offer a safe space for practice. The solution is particularly beneficial in rural or under-resourced areas, where physical access to medical labs or instructors is limited. Through this project, we aim to democratize medical education and bridge the gap between theory and practical application using advanced immersive technology.

2065. CYBERCOP X: THIEF

Project Advisor	MR. ABDUL SABOOR TAMOOR
Status	In Process of Completion

Cyber Cop X: Thief, is a futuristic Android game that gives players two distinct experiences: CyberCop Mode, where the player controls a high-tech officer and

completes varied missions (rescue, retrieve, defend); and Thief Mode, where the player must act as a stealthy criminal to evade CyberCop patrols and steal valuables. To elevate the gameplay beyond typical mobile titles, we implement advanced AI systems: a Finite State Machine (FSM) for non-player characters (NPCs) to exhibit intelligent states (patrol, chase, search), NavMesh Pathfinding for logical movement, and an Adaptive Difficulty system to keep the game balanced and continuously challenging for the player.

2066. THE GAME OF FATES

Project Advisor	MR. ABDUL SABOOR TAMOOR
Status	In Process of Completion

The Game of Fates is a 3D survival-adventure game developed in Unity, designed to deliver a dynamic and unpredictable gameplay experience. The game integrates reinforcement learning-based artificial intelligence that adapts to player behavior, creating unique challenges in every playthrough. Players navigate through multiple game zones, solve procedural puzzles, escape deadly traps, and compete against AI-driven opponents. The combination of adaptive AI, procedural content generation, and strategic survival mechanics makes the project innovative compared to traditional scripted games. The game aims to provide high replayability through intelligent challenge scaling, immersive environments, and dynamic decision-making scenarios.

2067. AI-POWERED POLYMER PROPERTY PREDICTION FOR MATERIAL DISCOVERY

Project Advisor	MR. ABDUL SABOOR TAMOOR
Status	In Process of Completion

Polymers are vital materials used in industries like plastics, aerospace, and medicine. Their properties—such as tensile strength, glass transition temperature, density, and thermal stability—determine their performance in different applications. Traditionally, discovering and testing polymer properties requires costly, time-consuming experiments. This research-based project proposes an AI-driven framework that predicts polymer properties directly from their SMILES molecular notation using machine learning and deep learning models[1][2]. The study will compare Random Forest, XGBoost, Graph Convolutional Networks (GCNs), and Transformer models on benchmark datasets like NeurIPS 2025 Open Polymer Prediction and Polymer Genome. Evaluation will be done using R², MAE, and RMSE metrics to determine the most accurate and efficient model. The outcome will be a research-based comparative analysis and a demo web interface for visualizing model predictions.

2068. THE LAST HOPE

Project Advisor	MR. ABDUL SABOOR TAMOOR
Status	In Process of Completion

It is a open world zombie survival game which follows the story of our protagonist John to save humanity. Open world zombie survival game which follows the story of john.

2069. CRIME SIMULATOR GAME

Project Advisor	MR. ABDUL SABOOR TAMOOR
Status	In Process of Completion

Crime Simulator is an open-world action game where players experience the life of a gangster in a realistic, AI-driven city. The game combines missions, free exploration, and decision-based outcomes. Players can fight, steal, drive vehicles, and protect areas while interacting with dynamic AI characters such as civilians, police, and zombies. Artificial intelligence plays a major role — NPCs react uniquely to crimes, police adapt their strategies, and zombies evolve and spread infections. The game focuses on giving players full control over choices, with every action affecting their reputation, city behavior, and storyline. Through advanced AI systems, realistic environments, and engaging missions, Crime Simulator provides a smart, immersive, and action-packed experience.

2070. AI-BASED TOURIST COMPANION WITH CULTURAL AWARENESS

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

Tourists often struggle to appreciate cultural landmarks due to language barriers, limited historical knowledge, and lack of real-time guidance. Existing tools such as guidebooks or static apps are either outdated or fail to provide personalized cultural insights. This project proposes an AI-Based Tourist Companion, a mobile application that uses Convolutional Neural Networks (CNNs) like MobileNet or EfficientNet for landmark recognition, combined with GPS data for improved accuracy. For generating cultural summaries, lightweight NLP models such as T5 or BART are fine-tuned on historical and cultural datasets, while MarianMT supports multilingual translation. Since the use of GPT-based systems is not allowed, these models are employed to ensure independence from proprietary engines. Text-to-speech and offline functionality further enhance accessibility in low-connectivity areas. The outcome will be a cross-platform mobile app that delivers real-time, culturally enriched, and accessible travel guidance.

2071. DROPLY: PICK AND DROP FACILITATION APP

Project Advisor	MR. AHMAD ARSLAN
Status	In Process of Completion

In Pakistan, parents and guardians face major challenges in arranging safe and reliable pick-and-drop services for students. Existing platforms like Uber or Careem are general-purpose and fail to address the unique needs of schools, colleges, universities, and organizations, while local solutions only provide limited features such as basic transport management or single ride booking. To overcome this gap, Droply introduces a complete mobile application that integrates all essential services in one place, including single, weekly, and monthly ride bookings, real-time tracking, secure in-app chat, Emergency SOS, trip sharing, AI-powered chatbot support, and flexible payment options (Cash, JazzCash, EasyPaisa). Unlike previous work, Droply brings together safety, convenience, and transparency in one platform, making it a specialized and trustworthy solution for student transportation in Pakistan.

2072. SMARTCVFILTER: AI-POWERED RESUME SCREEING & INTERVIEW AUTOMATION SYSTEM

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

SmartCVFilter is an AI-powered recruitment assistant that automates resume parsing, job description analysis, and candidate matching. It helps recruiters quickly shortlist top candidates, validate their skills through personalized quizzes, and schedule interviews automatically. The system aims to reduce human bias, improve fairness, and enhance decision-making in hiring through AI-driven analytics and automation.

2073. HEALTHPREDICTOR: AI-BASED HUMAN DISEASE PREDICTION AND HEALTH RECOMMENDATION SYSTEM

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

HealthPredictor is an AI-powered healthcare assistant that predicts diseases based on user-provided symptoms. Using supervised machine learning models trained on a Kaggle dataset of 600–700 diseases, the system provides disease predictions with confidence scores, personalized health recommendations, and specialist doctor referrals. Unlike existing tools such as Ada Health (generic), WebMD (information overload), and Buoy Health (weak personalization), this system emphasizes personalization, interactivity, and actionable advice. The project will be developed as a cross-platform application using Flutter (mobile & web), with Python (Flask/FastAPI) as backend. Expected results include reliable prediction, effective recommendations, and easy doctor access.

2074. JOINT-SENSE: AI-POWERED KNEE OSTEOARTHRITIS SCREENING AND HEALTH ASSISTANT

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

Joint-Sense is a web-based AI-powered health assistant that facilitates early detection and management of knee osteoarthritis (OA) through advanced machine learning models. The system analyzes knee X-rays to classify OA into stages — No OA, Early OA, and Advanced OA — and generates detailed PDF reports with annotated heatmaps and lifestyle recommendations. Integrated features such as real-time notifications, a chatbot for guidance, and a doctor visit scheduling system enhance user experience and accessibility. The project combines AI, cloud computing, and web technologies to deliver a reliable and affordable health screening tool for both patients and doctors.

2075. AGRICYCLE: AGRICULTURAL WASTE MARKETPLACE PLATFORM

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

AgriCycle is a mobile application that connects farmers possessing agricultural waste with businesses in the biofuel, compost, and fertilizer sectors. The app allows farmers to list waste and exchange it for money or agricultural supplies. It supports real-time supply-demand matching, logistics, and farmer education, promoting economic empowerment and environmental sustainability. AgriCycle also includes a premium feature using AI. Farmers can upload an image of a crop, animal, or field issue. The app

analyzes it and provides a voice-based solution in the user's selected language, helping low-literacy users make better farming decisions.

2076. SHADOW OF VALAR: A 2D PIXEL ACTION PLATFORMER USING UNREAL ENGINE

Project Advisor	MR. ALI ABBAS
Status	In Process of Completion

Shadow of Valar is a PC-based 2D pixel art action-platformer inspired by Sword of Xolan and similar titles. It aims to combine nostalgic visuals with modern mechanics such as elemental combat, dynamic enemy AI, and interactive environments. Built using Unreal Engine 5, the project emphasizes responsive controls, modular level design, and an engaging storyline. The problem this project addresses is the lack of depth and polish often found in indie 2D platformers, particularly with respect to AI. The project explores how a small team can leverage cutting-edge tools such as Unreal Engine, Aseprite, and GitHub to produce a feature-rich, academically valuable, and technically challenging game. Expected results include a polished demo featuring combat mechanics, intelligent enemy behaviors, multiple levels, a functioning UI/UX, and complete documentation.

2077. ORATODOC: REAL-TIME MULTILINGUAL DOCUMENT BUILDER

Project Advisor	MR. ALI RAZA
Status	In Process of Completion

Real time multilingual document Builder

2078. ANOMALYCRYPT: CHOAS-DRIVEN FRAMEWORK FOR SECURE IMAGE ENCRYPTION AND ABERRATION DETECTION

Project Advisor	MR. ANNAS WASEEM MALIK
Status	In Process of Completion

This project proposes AnomalyCrypt, a unified security framework specifically designed for resource-constrained IoT devices that combines selective chaos-based grayscale image encryption with machine learning-based anomaly detection. Unlike existing approaches that require full decryption for tamper verification, our system uses Region of Interest (ROI)-based selective encryption to preserve structural information necessary for direct anomaly detection on encrypted images. The framework implements a novel chaotic map for secure ROI encryption while maintaining computational efficiency suitable for IoT sensors, drones, and embedded systems. The machine learning module performs pixel-level anomaly detection without requiring full decryption, generating heatmap visualizations for tampered regions. The system includes secure communication protocols between Raspberry Pi nodes to demonstrate real-world IoT deployment scenarios. A Flutter-based interface provides monitoring and visualization capabilities. The research contribution includes comparative analysis against existing frameworks, evaluation on resource-constrained hardware, and validation of the security-efficiency trade-off in selective encryption approaches.

2079. CAREERQUEST AI: PERCISION GUIDANCE FOR PAKISTAN'S STUDENT

Project Advisor	MR. ANNAS WASEEM MALIK
Status	In Process of Completion

Students often face difficulty in making informed career decisions due to limited access to professional counselling, fragmented guidance platforms, and the absence of adaptive learning tools. This leads to poor career alignment, underemployment, and missed opportunities in higher education. Existing solutions are outdated, scattered across multiple platforms, or not personalized to the needs of Pakistani students. The proposed project CareerQuest AI aims to develop a web-based intelligent system that integrates career recommendations, adaptive test preparation, job market insights, resume building, and mentorship into a unified platform. The system uses machine learning models for personalized career suggestions, natural language processing (NLP) for extracting in-demand skills from job postings, and adaptive learning algorithms for test preparation according to student performance. Core knowledge areas from computer science such as software engineering, data science, artificial intelligence, web development, and database systems will be applied to develop the solution. The expected outcome is a centralized AI-driven platform that demonstrates technical innovation through the integration of intelligent modules and creates social impact by bridging the gap between academic learning and job market demands, enabling students in Pakistan to make confident and future-ready career decisions.

2080. PRIVORA: INTELLIGENT, ENCRYPTED COMMUNICATION WITH ADAPTIVE PRIVACY AND VERIFIED INTEGRITY

Project Advisor	MR. ANNAS WASEEM MALIK
Status	In Process of Completion

Privora is an AI-powered secure messaging platform designed to address modern privacy and security challenges. Unlike traditional apps that offer basic encryption, Privora provides adaptive privacy, phishing detection, and verified message integrity. Users can exchange encrypted text, audio, images, and video in real-time across web and mobile platforms. The system uses AES-256 for data security, Python-based AI models for threat detection, and SHA-256 hashing to ensure message authenticity. The project balances innovation with practical scope, targeting privacy-conscious users such as legal professionals, journalists, and corporate teams.

2081. DEALBAZAR: A COMMUNITY DRIVEN DEALS PLATFORM FOR PAKISTAN

Project Advisor	MR. ANNAS WASEEM MALIK
Status	In Process of Completion

DealBazaar is a community-driven web application designed to address the lack of a centralized, trustworthy platform for discovering the best deals in Pakistan. At present, consumers often miss time-sensitive discounts and offers due to scattered promotional campaigns, foreign-focused deal sites, and limited local validation. This project leverages the MERN stack and automated web scraping to aggregate online and offline deals from

leading retailers. Users will be able to contribute by sharing, voting, and commenting on deals, ensuring authenticity and community-based validation. The platform introduces key features such as bilingual support (Urdu and English), personalized price drop alerts, social sharing with WhatsApp integration, and a mobile-friendly responsive interface. By combining crowd-sourced participation with intelligent search and recommendation systems, DealBazaar aims to empower Pakistani consumers to make smarter, cost-effective purchasing decisions. The expected outcome is a functional, scalable, and user-friendly platform that fills a critical gap in the local e-commerce ecosystem.

2082. VERILEARN (VERIFIED LEARNING)

Project Advisor	MR. ANNAS WASEEM MALIK
Status	In Process of Completion

Peer-to-peer skill exchange platforms often face the challenge of false expertise and lack of authenticity, resulting in poor learning experiences and reduced trust. VeriLearn addresses this issue by introducing an AI-powered skill verification system that evaluates users' proficiency before allowing them to teach. The system uses adaptive quizzes, natural language processing (NLP), and multimodal assessments (text, voice, image) to accurately verify skills. It also employs CNIC-based authentication to prevent duplicate or fake accounts, ensuring secure and credible participation. This project is significant because it enhances trust, reliability, and quality in informal learning environments. The development involves key knowledge areas such as AI, machine learning, NLP, web development, and information security. Expected outcomes include a reliable verification model, improved learner satisfaction, and a scalable web-based platform for verified skill exchange.

2083. CODEVISOR: AI-POWERED PROJECTBASED CODING & COMPETITIVE LEARNING PLATFORM

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

CodeVisor is an AI-powered project-based coding and competitive learning platform designed to bridge the gap between theoretical knowledge and real-world programming practice. The platform addresses the limitations of traditional coding portals, which rely on static problems and lack adaptive learning mechanisms. CodeVisor introduces an intelligent ecosystem that integrates AI-driven tutoring, project-based exercises, personalized challenge generation, and real-time competition to create an engaging and practical learning experience.

2084. SMARTFUZZER: LLM-AUGMENTED BASH-BASED WEB FUZZING TOOL FOR CYBERSECURITY TESTING

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

SmartFuzzer is a cybersecurity testing tool that integrates traditional bash-based fuzzing with Large Language Models (LLMs) such as GPT-4 and LLaMA. It identifies hidden directories and files on web servers, logs structured results, and uses AI to analyze anomalies and provide intelligent recommendations. The project addresses the limitations

of existing fuzzers, making web security testing more intelligent, adaptive, and accessible.

2085. ENGAGEX: A DUAL-PORTAL PLATFORM FOR SOCIAL MEDIA ENGAGEMENT TASKS

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

In today's digital world, social media plays a major role in helping people, influencers, and businesses grow their online presence. However, getting genuine engagement such as likes, follows, views, and subscribers has become difficult. Many people use fake engagement tools or bots that give temporary results but harm their credibility and trust. Small businesses and individual creators struggle to find an honest and safe way to increase their reach without wasting money on fake services. This creates a strong need for a reliable and transparent platform that connects people who want real engagement with those who can provide it genuinely. EngageX is a web and mobile-based application designed to solve this problem by creating a safe and automated marketplace for social media engagement. The platform connects two main types of users — buyers, who post tasks to get engagement on their content, and sellers, who complete these tasks to earn money. EngageX removes fake and spam methods by ensuring that all activities are performed by real users in a fair and easy system. The platform includes two dashboards, one for buyers and one for sellers. Buyers can post and manage engagement tasks, while sellers can view and complete them. A secure wallet system manages all payments automatically, allowing users to track their balance and transactions easily. To make the process smarter, EngageX uses Artificial Intelligence (AI) to recommend suitable tasks to sellers based on their performance and interests. The AI system also rates sellers on accuracy and speed, helping to build a fair ranking system. For transparency, EngageX includes an Admin Dashboard to monitor user activity, detect suspicious behavior, and block fake or bot accounts using a Fraud Detection System. The system also provides Analytics and Reports to help users and admins understand engagement levels and financial performance. EngageX is developed using ReactJS for the web app, React Native for mobile, Django with Django REST Framework for the backend, and MongoDB/MySQL for data storage. With its secure design, automation, and reliability, EngageX offers a complete solution to the problem of fake engagement and helps users achieve real and trustworthy social media growth.

2086. PAKRESIDENCYLAW: AI-POWERED LEGAL AID WEB APP FOR LAND DISPUTES IN PAKISTAN

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

PakResidencyLaw is a web-based platform designed to make legal help more affordable and accessible for people dealing with residential land disputes in Pakistan. Many citizens struggle to understand complex property laws and cannot afford professional lawyers. This project uses Artificial Intelligence (AI), Optical Character Recognition (OCR), and Natural Language Processing (NLP) to solve that problem. The system will allow users to upload legal documents, ask questions in Urdu, Roman Urdu, or English, and receive clear, plain-language explanations about their legal situation. It will also detect potential issues in property papers and link user queries with relevant Pakistani land laws. In short,

PakResidencyLaw aims to help citizens gain legal awareness, avoid exploitation, and make informed decisions regarding their property disputes.

2087. BUILDMYRIDE: A CAR CUSTOMIZATION AND DESIGN STUDIO

Project Advisor	MR. ASAD KAMAL
Status	In Process of Completion

BuildMyRide is a browser-based application designed for local automobile customization and design. It allows users to create fully customized cars in 3D with an intuitive drag-and-drop interface, enabling selection of body parts, colors, dashboards, seats, and interior layouts. Users can rotate and view their designs from every angle and save models in a virtual garage for future editing or showcasing. Unlike traditional CAD tools (which are highly technical) or preset car configurators (which are very restrictive), BuildMyRide focuses on accessibility and creativity. A built-in AI Design Assistant helps users by suggesting visual balance, symmetry, and part compatibility improvements.

2088. CODECRACKER

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

Learning to code remains a challenge for beginners who want to get into coding. Users find it difficult to develop an interest in coding when they are forced to focus on syntax rather than logic. Recent studies indicate that student interest in programming is declining as compared to other applied areas of ICT. Block-based visual programming simplifies the process of learning programming and is considered a promising tool for education. The current apps in this domain lack some features such as AI and real time code translation. CodeCracker aims to bridge some of these gaps with the help of block coding and puzzles. The final product will consist of AI feedback, a gamified experience, and a smooth transition to real coding languages from blocks, and will induce logic building in users in a way that keeps users involved.

2089. SMARTFITAO AI

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

SmartFitao AI is an AI powered 3D tailoring and e-commerce platform that connects local Pakistani tailors to offer their services to international clients. Unlike traditional platforms like Amazon or Shopify, which focus on Western clothing and static 2D visuals, smartfitao AI provides a tailor centric experience with ethnic and custom garments displayed in a real time 3D marketplace. The platform combines AI, computer vision, and 3D simulations to improve sizing accuracy, reduce returns, and offer a complete solution for tailors and customers. SmartFitao AI stands out by empowering tailors with a 3D Market place with studio, order management, revenue dashboards, and tracking tools, giving them control over their business. At the same time, it offers customers personalized, 24/7 Chatbot, AI driven sizing prediction from fix Sizes (S,L,M,XL) and virtual try-ons, supporting ethnic wear and realistic 3D visualization, reducing sizing errors and improving satisfaction in ways traditional platforms cannot. The platform's AI-based size prediction from fix Sizes (S,L,M,XL) uses TensorFlow/

PyTorch and computer vision tools like OpenCV and YOLOv8. Users upload front and side images, and the system extracts body landmarks to calculate measurements such as Shalwar Kameez length, chest width, and sleeve length, achieving up to 80% accuracy or by fix sizes. A 3D avatar can also simulate garment fit in real time, ensuring reasonable sizing without manual measurements and reducing returns.

2090. UNIFIED TICKETING, LOGISTICS & FLEET PLATFORM

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

There are problems with the transport sector in Pakistan because of broken platforms, manual processes, and not being able to see what's going on in real time. TransNova is a single digital solution that brings together passenger ticket booking, logistics and parcel delivery, and fleet management all in one place. The system will let you track things in real time, buy tickets online with local payment methods, get help from an AI chatbot, and see dashboards for monitoring operations. TransNova wants to make the customer experience better, cut down on delays, and help transport companies make better decisions by using modern web and mobile technologies.

2091. RELIFE: DON'T THROW IT, RELIFE IT

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

ReLife is a smart, AI-powered platform that promotes reuse and efficient waste management through IoT and digital technology. Smart bins equipped with ultrasonic and classification sensors monitor garbage levels and sort waste into plastic, paper, metal, and other categories, sending real-time alerts to waste collectors. Alongside this, the ReLife mobile and web applications provide a buy/sell and donation platform, where users can list items assisted by AI-based image recognition for quick categorization. NGOs and authorities can manage bins and donations through an integrated web dashboard. By combining IoT, AI, mobile, and web systems, ReLife offers a unified solution for cleaner cities and meaningful social impact.

2092. DEVOPS CLOUD ARCHITECTURE COPILOT

Project Advisor	MR. ASIF FAROOQ
Status	In Process of Completion

This is an AI-powered web platform that optimizes cloud infrastructure by analyzing IaC configurations before deployment. It predicts incidents, ensures compliance, and auto-generates cost and risk reports for AWS, Azure, and GCP — helping DevOps teams deploy smarter, faster, and more securely.

2093. PEIRCEAN TRIADIC GA TOOLKIT

Project Advisor	MR. ASIM RAZA
Status	In Process of Completion

This project extends the field of Genetic Algorithms (GA) by incorporating Charles Sanders Peirce's Triadic Logic into both classical Darwinian GA and Peircean GA.

Current GA models are limited in handling uncertain, indeterminate, and vague data. By leveraging Peirce's triadic framework of Chance, Necessity, and Habit, the project proposes the development of a Triadic Genetic Algorithm (T-GA) Toolkit. The system will include a GUI interface and experimental evaluations on benchmark functions and selected real-world problems. Expected outcomes include better adaptability, robust handling of vagueness, and improved optimization performance.

2094. TRAK: TRUTH & REAL-TIME ALERTS KEEPER

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

This project proposes the development of a generalized news monitoring application capable of automatically tracking keyword mentions across multiple categories such as education, health, politics, sports, and entertainment from online news websites and blogs. The motivation behind this project stems from the ever-increasing volume of digital content and the urgent need for timely insights. A critical gap exists in Pakistan where, despite global trends toward automation, several government departments still rely on manual news detection, which is time-consuming and inefficient. The proposed system addresses this gap by offering an automated, accessible, and scalable solution that can be adopted by government institutions, private organizations, media houses, researchers, and individuals. The project will utilize knowledge areas such as natural language processing, web scraping, database management, and software engineering. The expected outcomes include a user-friendly software platform that provides real-time alerts, trend analysis, and categorized reports. By automating the process, the system will enhance decision-making efficiency, reduce human effort, and improve access to timely and relevant news insights.

2095. RECRUITER: AGENTIC AI DRIVEN RECRUITMENT SYSTEM

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

Traditional recruitment processes are inefficient, relying heavily on manual effort and prone to inconsistency and bias. Keyword-based systems often miss qualified candidates, while human evaluation can lack consistency. These challenges lead to longer hiring cycles, higher costs, and poor candidate experiences. There is a clear need for an AI-driven solution that streamlines end-to-end hiring matching, outreach, screening, shortlisting, and scheduling while ensuring transparency and fairness in decision-making.

2096. ONE PROMPT WEB APPLICATION

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

In today's software development world, a lot of time and energy is spent on repetitive setup tasks instead of actual coding. Developers often have to go through multiple steps like creating project structures, installing dependencies, setting up servers, connecting databases, and handling deployments before they can even begin working on the real product. These steps are important, but they are time-consuming and reduce the focus on

creativity and innovation. As a result, developers spend more time preparing the environment than building useful features. Our project, One Prompt Web Development, is designed to make this process easier and faster. It provides an AI-powered platform where users can create complete MERN stack (MongoDB, Express, React, and Node.js) applications just by giving a simple prompt. The input can be in the form of text, voice, or even an image. The system understands what the user wants and automatically generates the project structure and code accordingly. This means users do not need to manually set up projects or write repetitive code from scratch. The platform combines all major steps of web development into one place. It includes a browser-based Integrated Development Environment (IDE) where users can view and edit their generated projects. The IDE also provides a real-time preview, allowing users to see live changes as they code. Additionally, it features a voice-controlled AI assistant that helps users perform actions through natural speech commands such as generating new components, debugging code, or managing deployment tasks, making the experience more interactive and efficient. Users can also connect their projects to GitHub for version control and easily deploy them to the web with a single click through built-in cloud deployment features. By automating the setup, coding, and deployment processes, One Prompt Web Development helps developers focus more on problem-solving, design, and innovation. It reduces the time needed to build a Minimum Viable Product (MVP), supports teamwork through integrated project management, and lowers the overall cost of development. The platform can be useful for both beginner and experienced developers who want to quickly create working prototypes or kickstart new ideas without wasting time on technical setups. In simple terms, One Prompt Web Development makes web development faster, simpler, and smarter. It transforms the traditional way of building applications by allowing developers to move from an idea to a working prototype with just one prompt. This not only saves time but also encourages creativity and makes the entire development process more efficient and accessible to everyone.

2097. PHISHEYE: AI-BASED PHISHING EMAIL DETECTION TOOL

Project Advisor	MR. DANIYAL AHMED
Status	In Process of Completion

The PhishEye project introduces an AI-powered phishing detection system that integrates Machine Learning (ML) and Natural Language Processing (NLP) to identify phishing emails in real time. The system analyzes linguistic, structural, and behavioral features of emails — including domain entropy, sender reputation, and suspicious URLs — to accurately detect malicious intent. By incorporating SHAP (SHapley Additive Explanations), PhishEye ensures explainable results, allowing users and administrators to understand the reasoning behind each classification. Furthermore, PhishEye features a feedback-driven retraining mechanism that continuously improves detection accuracy over time. Designed as a web-based and user-friendly platform, it bridges the gap between research and real-world application, making it suitable for both educational institutions and enterprise environments. Through transparency, adaptability, and accuracy, PhishEye aims to strengthen digital trust and awareness in combating phishing attacks.

2098. EYESON AI: A SMART SURVEILLANCE SYSTEM FOR PHYSICAL EXAMS

Project Advisor	MR. DANIYAL AHMED
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Status	In Process of Completion
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EYESON AI is an AI-powered, web-based surveillance system for physical exams that detects and prevents cheating behaviors in real time. Using multiple cameras, microphones, and AI-based analytics, it identifies suspicious actions such as whispering, excessive head turns, or abnormal gestures. The system automates attendance through face recognition, verifies seating arrangements, and generates real-time alerts with video or audio evidence. A React-based dashboard allows live monitoring, reporting, and manual review of flagged incidents. Designed for scalability, cross-platform access, and resilience, the system enhances academic integrity and reduces reliance on manual invigilation.

2099. SITE VISION: AR CONSTRUCTION ASSISTANT FOR JUNIOR CIVIL ENGINEERS

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

The construction industry provides the physical structure essential for human living and survival. Construction sites currently rely on 2D blueprints without any real-world preview, increasing the risk of misinterpretation. The conversion of blueprints into real-world constructed buildings depends on the experience of engineers themselves and on the supervision. Augmented Reality can be integrated in construction industry to replace this manual dependence, overcome construction waste and rework. Site Vision will lay the 2D blueprint on real construction site replacing the traditional manual methods and reducing construction waste and rework by providing the features that will revolutionize the construction industry by combining it with AR.

2100. INTERVAI: COACH WITH CAREER CRAFTING

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

Our final year project, IntervAI Coach with Career Crafting, aims to help job seekers (developers) to prepare for real-world interviews using Artificial Intelligence. The goal is to make the hiring process smarter and fairer for both candidates and companies. It's a smart web application platform that guides users step by step from resume improvement to technical quizzes and final interviews using Artificial Intelligence. When someone signs up/logins, their progress is tracked through every stage. First, they upload their resume, which AI reviews for mistakes like grammar, formatting, or missing details. It also gives helpful suggestions and offers templates to make resumes look more professional. Based on this, a resume score is given. If the score is more than 70%, they are eligible to move on to the quiz stage. The quiz is field-specific, based on user's selected area of interest and may cover topics like OOP, DSA, DB, PF. The difficulty depends on their experience. The quiz is timed, and users can't switch tabs. If they pass, they qualify for the final AI interview. If not, AI creates a personalized improvement plan and suggests learning materials, including YouTube courses, based on their weaknesses. User then proceeds to interview phase where system uses their camera and mic to detect eye movement and attentiveness. Interview includes both technical and personality-based questions and their complexity depends on their experience. AI then evaluates user's personality according to their responses. Afterwards, users receive a detailed progress report. Profiles are generated based on each user's performance and level of experience.

Employers can search for suitable candidates and pay to unlock full access to their profiles. The system is being developed using React for the web interface, Python with Django for the backend.

2101. BROWSEFENCE

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

BrowseFence is a smart proxy-based internet management system that monitors, filters, and controls web traffic in real time. It prevents unsafe or unproductive browsing through keyword and domain filtering, logging, and admin controls. The system ensures secure, responsible, and efficient internet use across schools, offices, and homes.

2102. AI-BASED NOISE SIGNATURE METER FOR URBAN ZONING VIOLATIONS

Project Advisor	MR. ENGR. SAJID SALEEM
Status	In Process of Completion

Urban environments face increasing challenges from noise and violence due to traffic, construction, fireworks, and public gatherings. Despite zoning regulations, enforcement remains weak because of the lack of real-time monitoring systems. This project proposes an AI-based Violence Detection Meter that uses machine learning algorithms to detect and classify disruptive sound patterns (e.g., construction, rallies, fireworks) in designated quiet zones such as schools, hospitals, and residential areas. Once a violation is detected, the system sends automated alerts to authorities via dashboard or SMS/email. The solution will improve quality of life, support legal enforcement, and provide valuable data for urban planning.

2103. DEVOPS AI AGENT

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

This project proposes the development of an AI-powered DevOps Agent that automates AWS deployment workflows using natural language interfaces. By integrating services such as EC2, S3, RDS, Lambda, CloudFormation, and CodePipeline with fine-tuned Large Language Models (LLMs), the solution enables conversational orchestration of complex deployment pipelines. Users will be able to deploy applications by issuing natural language commands like “Deploy my Node.js app with auto-scaling and monitoring.” The proposed system reduces complexity, eliminates manual errors, and minimizes the steep learning curve associated with AWS services. Delivered as a web application with chat interface and monitoring dashboards, the project aims to simplify cloud deployment for developers at all skill levels, while ensuring expert-level automation, monitoring, and optimization.

2104. AI-ENABLED EMPLOYEE MANAGEMENT RECORD

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

NeuroForce is an AI-driven employee management system that automates attendance, productivity tracking, and performance evaluation. It integrates facial recognition, machine learning, and real-time alerts to ensure transparency and efficiency in hybrid workplaces. The system promotes fairness, data security, and seamless integration with tools like Slack, Jira, and GitHub.

2105. HAIR CONSULTANT

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

Hair Consultant is an innovative mobile application aimed at revolutionizing the grooming industry by offering flexible booking options and AI-powered haircut recommendations. The app enables users to upload images, which are analyzed to suggest the most suitable haircuts based on face shape. It offers home visits or salon appointments with barbers specializing in these styles. The app also integrates health analytics, a trend feed, and e-commerce for barber tools, ensuring a comprehensive, personalized grooming experience. Additionally, the app includes Location Intelligence to offer smart recommendations based on user location, optimizing service reach and customer satisfaction.

2106. DIGITAL SHARK TANK PAKISTAN

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

The Pakistani startup ecosystem faces a significant barrier: entrepreneurs often lack the skills and platform to effectively present their ideas to investors. "Digital Shark Tank Pakistan" is a web-based platform designed to bridge this gap. It provides a digital environment where entrepreneurs can create business pitches and refine them using an AI-powered chatbot that offers feedback on structure, clarity, and completeness. The platform also facilitates connections by allowing investors to discover and review pitches filtered by industry, stage, and funding level. Built with a modern technology stack including React, Node.js, Firebase, and the OpenAI GPT API. The expected outcomes include a fully functional platform, evidence of the AI's utility, and a positive reception from test users, ultimately aiming to empower local entrepreneurs and strengthen the startup community.

2107. AI-POWERED NAVIGATOR FOR ETHICAL OBSCURE NET EXPLORATION AND INTELLIGENCE GATHERING

Project Advisor	MR. HAFIZ BILAL SHAHID
Status	In Process of Completion

Onion sites form a large, anonymous portion of the Internet's hidden ecosystem, often hosting stolen or sensitive data that threat actors leak for illicit purposes. Manual monitoring of these unindexed, constantly evolving sites is highly inefficient. Traditional approaches rely on laborious navigation or simple scraping rules, which frequently miss critical information and cannot keep pace with the dark web's scale and volatility. To address this, we propose DarkPulse: an AI-powered autonomous crawler for onion (.onion) sites that automates the discovery and extraction of leaked data. DarkPulse

implements a two-stage machine learning workflow: first it classifies crawled pages as potential leak repositories or irrelevant content, then it applies natural language processing to extract structured leak data. The extracted information is stored in a searchable database. By automating dark web data collection and intelligently filtering content, our system aims to significantly enhance efficiency, accuracy, and timeliness of leak monitoring. In short, DarkPulse will help security analysts and law enforcement rapidly identify new data leaks on the dark web, overcoming limitations of manual methods and basic crawlers. This approach is aligned with the recognized need for automated monitoring in illicit cyber environments, and promises to deliver more reliable, up-to-date threat intelligence from onion sites than existing tools.

2108. TELEDENT AI: SMART DENTAL SCANNER AND LIVE DIAGNOSIS PLATFORM FOR REMOTE PATIENT CARE

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

Teledent AI is an AI-powered dental screening and teleconsultation system designed to make dental care accessible, fast, and reliable. The system allows patients to upload dental images or perform real-time mouth scans using their mobile or webcam. Using YOLOv5, CNN, and OpenCV, the system detects dental issues such as cavities, and misalignment problems. The platform generates an annotated report and enables patients to consult certified dentists through live video calls. The project aims to provide early detection, reduce unnecessary clinic visits, and support remote communities with limited access to dental facilities.

2109. TRUE TILAWAH

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

True Tilawah is an AI-based mobile application that helps individuals improve Quranic recitation by providing real-time feedback. Many learners face challenges in accessing qualified Qari due to limited availability, high costs, or time constraints. This often results in persistent errors and reduced confidence. The app uses speech recognition and artificial intelligence to detect mistakes such as mispronunciations, omissions, and incorrect words. It provides instant text and voice-based feedback, enabling learners to self-correct without relying on a tutor. Built with Android react native for the frontend and Node.js with MongoDB for the backend, it ensures scalability, reliability, and smooth performance. AI models like Whisper, DeepSpeech, and TensorFlow enhance accuracy in Quranic Arabic recognition. Expected outcomes include improved recitation accuracy, affordable and inclusive learning, and personalized progress tracking. By merging technology with spiritual practice, True Tilawah offers an accessible and effective solution for independent Quran learning worldwide.

2110. MARKETSPY: AI-POWERED PRODUCT AND TREND TRACKER

Project Advisor	MR. HAFIZ USAMA ISHTIAQ
Status	In Process of Completion

In the modern digital economy, e-commerce platforms such as Amazon, eBay, Daraz, and AliExpress have transformed the way products are marketed and sold, generating vast amounts of dynamic data every minute. However, small and medium-sized enterprises (SMEs) and individual online sellers often struggle to monitor fluctuating prices, changing product availability, and evolving consumer trends across these platforms. Manual market research methods are time-consuming, prone to human error, and fail to capture real-time market dynamics. Existing solutions, such as price trackers and keyword trend tools, provide limited functionality and lack predictive intelligence. To overcome these limitations, MarketSpy—AI-Powered Product and Trend Tracker proposes an integrated, intelligent system that automates the process of data collection, analysis, and forecasting. The platform employs web scraping to gather product data from multiple e-commerce sites, data preprocessing for cleaning and normalization, and machine learning models specifically Linear Regression and XGBoost to predict future price trends and detect emerging market patterns. The system also includes a real-time alerting mechanism to notify users of sudden price drops or demand surges, ensuring they can make timely and informed business decisions. The front end is developed using React.js for web and React Native for mobile applications, while the backend, built with Node.js, ensures smooth integration with machine learning services and the PostgreSQL database. By providing an intuitive dashboard with interactive visualizations, MarketSpy empowers businesses to gain actionable insights, optimize pricing strategies, and enhance competitiveness in the rapidly changing world of e-commerce. Ultimately, this project aims to bridge the gap between data-driven intelligence and real-time decision-making, offering a scalable and cost-effective market analytics solution for modern businesses.

211. DREAM TALES

Project Advisor	MR. IHTISHAM-UL-HAQ
Status	In Process of Completion

For many parents, bedtime can be a stressful or rushed part of the day. Children need emotional reassurance, connection, and a calming environment to settle down at bedtime. However, busy schedules, exhaustion, or physical distance can make it hard for parents to consistently provide that personalized attention. Traditional bedtime stories may not always resonate with a child's current emotions or interests. Additionally, parents struggle to find stories that are both age-appropriate and engaging enough to capture their child's imagination while helping them wind down peacefully. There is a lack of tools that combine emotional personalization, convenience, and technology to create meaningful bedtime moments.

212. SMARTNOTES

Project Advisor	MR. IHTISHAM-UL-HAQ
Status	In Process of Completion

SmartNotes is a web-based, AI-powered platform designed exclusively for students and faculty of the University of Central Punjab (UCP) to create, share, and access academic notes securely and efficiently. The system replaces the current unstructured methods of note sharing—such as WhatsApp and Google Drive—with a centralized, intelligent, and university-verified environment. Users log in using their official UCP email to ensure secure and restricted access. Notes can be uploaded in both PDF and scanned/handwritten formats, which are processed through Optical Character Recognition (OCR) to extract readable text. An AI Summarizer based on Transformer models (BART/T5) generates

concise summaries for quick previews, while a verification pipeline using Retrieval-Augmented Generation (RAG) and classification models (BERT/DistilBERT) ensures that all uploaded content is relevant, accurate, and safe for academic use. Contributors earn Trust Scores for verified and positively rated uploads, encouraging quality and accountability within the community. The platform also supports search and filtering by semester and subject, PDF previews, and a leaderboard showcasing top contributors. By combining AI-driven summarization, verification, and recognition, SmartNotes fosters collaboration, enhances learning efficiency, and builds a trusted academic resource hub exclusively for the UCP community.

2113. HEARTECH

Project Advisor	MR. IHTISHAM-UL-HAQ
Status	In Process of Completion

Hearing loss in early childhood often goes unnoticed in countries like Pakistan. This happens because clinical tools such as OAE, AABR, ASSR, and Tympanometry are costly and not easily available. The delay in detection affects a child's speech, learning, and social growth. The project HearTech aims to solve this problem. It is an AI-powered mobile and web app that identifies early signs of hearing loss. It uses age-based questionnaires, milestone tracking, and behavior checks to assess risk. This project provides low-cost and easy-to-access assistive technology. It helps parents, teachers, and health workers screen children and refer them for medical diagnosis when needed. The work combines knowledge from several areas. These include software engineering, artificial intelligence, databases, mobile and web development, human-computer interaction, and data analytics. The final goal is to create a working healthcare software system. It will support community-level hearing screening and provide valuable insights into how AI can help with early health detection in developing countries.

2114. AUTOTUBE AI: AI-POWERED YOUTUBE TOOLKIT FOR CREATORS

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

YouTube has become a major platform for creators to share content, grow communities, and generate income. However, beyond video production, creators face the challenge of optimizing their content to align with the ever-evolving YouTube algorithm. Tasks such as generating transcripts, writing summaries, crafting engaging titles, selecting relevant tags and hashtags, designing thumbnails, and identifying the best upload times are not only time-consuming but also critical for video discoverability and viewer engagement. Many existing tools provide fragmented solutions, often behind paywalls, leaving creators—especially beginners—at a disadvantage. AutoTube AI addresses this gap by providing an AI-powered, all-in-one toolkit designed specifically for YouTube creators. Leveraging natural language processing, machine learning, and content optimization techniques, the system automates transcription, video summarization, title and tag generation, hashtag recommendations, thumbnail creation, content category prediction, and engagement forecasting. It further suggests optimal publishing times to maximize reach. The project draws upon knowledge areas in artificial intelligence, natural language processing, web development, and data analytics to deliver a unified platform. The expected results include reduced manual workload, improved workflow efficiency, enhanced content accessibility, and stronger audience engagement through data-driven

insights. By streamlining post-production and optimization processes, AutoTube AI empowers both novice and experienced YouTubers to focus on creativity while ensuring their videos perform better on the platform.

2115. COLLABRYX: AI-BASED NETWORKING PLATFORM FOR BUSINESS ENTHUSIAST AND FOUNDERS

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

People face difficulties networking for entrepreneurial collaboration due to limited exposure and lack of guided systems. Existing platforms like LinkedIn are too generalized and don't facilitate AI-assisted startup planning or intelligent matching based on deep interests and skills.

2116. AI-POWERED MULTI-AGENT SYSTEM FOR AUTOMATED BOOKING AND CRITICAL RESPONSE

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

This project proposes a 24/7 automated system powered by coordinated AI agents that handle hotel room bookings and critical response services during off-hours, holidays, or staff unavailability. Multiple specialized agents: Reception, Booking, Availability, Emergency, and Feedback, IOT which work together using frameworks like LangChain and CrewAI. The system enables multi-channel communication (WhatsApp or web chat) using tools like Whisper, ElevenLabs, and Twilio. It ensures real-time response, multilingual support, and human-like interactions for a seamless customer experience in hospitality.

2117. ARCANUM OF WARRIORS

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

Arcanum of Warriors is a 3D single-player story-driven RPG developed in Unity. The game follows a human girl warrior as she journeys through a magical and mysterious world filled with ancient ruins, mystical landscapes, and challenging enemies. Players experience immersive combat with smooth animations and realistic healing sequences, creating a dynamic and engaging adventure. Throughout her journey, a pet companion walks alongside her, enhancing the atmosphere and emotional depth of the game world. The companion adds charm and life to the environments, supporting exploration and storytelling without participating in combat or healing, making the world feel more alive and interactive. The project demonstrates the integration of Unity systems such as character animation blending, AI path-following for the companion, interactive environments, and narrative-driven level design. It showcases the development of a fully functional single-player RPG prototype that combines storytelling, exploration, and engaging gameplay in a visually rich and immersive experience.

2118. CRIMINALS CALL TRACKING ANALYTICS SYSTEM

Project Advisor	MR. IRFAN LATIF
Status	In Process of Completion

The Criminals Call Tracking Analytics System (CCRAS) is a cloud-based platform designed to support law enforcement agencies in detecting and analyzing suspicious communication activities. Traditional call detail record (CDR) systems lack integration, scalability, and real-time monitoring, which often leads to delays in detecting threats and hinders proactive crime prevention. This project proposes an integrated solution that combines CDR analysis, geolocation tracking, and risk-based categorization into a unified platform. By using synthetic and anonymized datasets to respect privacy constraints, the system will simulate real-time call streams, categorize suspicious calls into risk levels, and display communication and movement patterns on interactive dashboards. Officers will be able to generate investigation reports, track suspects in real time, and make informed, data-driven decisions more efficiently. Unlike existing CDR or crime-mapping tools, CCRAS uniquely integrates real-time data processing, geolocation visualization, and predictive analytics on a secure cloud infrastructure. The expected outcome is a scalable, privacy-compliant system that demonstrates how law enforcement can improve investigation speed, reduce manual workload, and enhance public safety through technology-driven crime analytics.

2119. CITIZENGPT

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

In Pakistan, many people do not get the legal help they need because laws are written in very difficult language, lawyers are often too expensive, and there are no simple platforms to guide them. As a result, ordinary citizens feel lost when they have to deal with issues like resolving land disputes, reporting cybercrime, or understanding their rights during arrest. This lack of awareness causes delays in justice and leaves people feeling helpless. The problem is even bigger for Pakistanis living abroad, who face challenges in managing property, dealing with inheritance matters, or fighting fraud while being away from the country. They often don't have easy access to lawyers or clear updates about local laws. Therefore, there is a strong need for a smart, easy-to-use, and multilingual tool that can explain the law in simple words, help both local citizens and overseas Pakistanis understand and protect their rights. Prompt correction so users can refine their questions and get better answers.

2120. GEO-ASSISTANT

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

This project introduces Geo-Assistant, a mobile application designed to act as a smart travel companion by providing curated, city-wide recommendations for top-rated places as soon as a traveler enters a new city. Unlike existing applications such as Google Maps or TripAdvisor, which emphasize nearby searches, Geo-Assistant delivers authentic and unbiased recommendations by aggregating reviews from multiple APIs (TripAdvisor, Social Media, etc.) and ranking them through a proprietary weighted algorithm. The app

enriches travel experiences by offering cultural, historical, and culinary insights, while also featuring an NLP-powered chatbot for query-based exploration. Expected outcomes include a deployed mobile app with backend orchestration, an intelligent recommendation system, and a seamless user interface that enhances the traveler's journey

2121. BUSEASE PK

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

Public transport in Lahore can be confusing and time-consuming, especially for people unfamiliar with bus routes and stops. Our mobile application aims to make bus travel easier by providing smart and efficient route guidance using Google Maps and local transport data including all the schedules of local transport and their routes as well as notable Chingchi rickshaw stops and information about the tour guide. By supporting both intracity (within Lahore) and intercity (from Lahore to other cities) travel, the app offers a complete solution for daily commuters, students, and visitors. [L] It will help users find the best routes, correct bus stops, estimated fares, and travel times in one place.

2122. AUTO MUNCHING

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

This proposal outlines the development of Auto Munching, an intelligent, mobile-based application designed to revolutionize customer service in the restaurant industry. The project addresses the critical problem of operational inefficiency during peak hours, which leads to long queues, order inaccuracies, and diminished customer satisfaction. Auto Munch leverages cutting-edge Artificial Intelligence (AI) and Natural Language Processing (NLP) to provide a seamless, voice-activated ordering system. The core of the project involves creating a conversational AI that can understand natural, free-flowing speech in multiple languages (English and Urdu) to take customized food orders at drive-thrus, dine-in tables, and front counters. The system will feature a customer-facing mobile application built with Flutter, a real-time kitchen dashboard, and an administrative portal for restaurants to manage their unique menus. Expected results include a significant reduction in service times, improved order accuracy, and an enhanced, modern dining experience for customers. Introduction and Background The food service industry, particularly in bustling urban centers, constantly faces the challenge of managing high customer traffic efficiently. Establishments ranging from local eateries like Biryani Master to popular brands like Chaman Ice Cream experience bottlenecks during peak meal times. This often results in overwhelmed staff, leading to human errors in order taking, longer wait times, and a frustrating customer experience. The conventional methods of ordering—manual note-taking by waiters or shouting orders across a counter—are prone to miscommunication and are becoming increasingly outdated in a technologically advancing world. While some global chains have experimented with basic voice prompts or digital kiosks, these solutions often lack the flexibility and natural interaction that customers desire. They are typically restricted to fixed commands and fail to handle custom requests or conversational nuances. Auto Munching is motivated by the need for a more intelligent, adaptable, and accessible solution. By providing an AI-driven platform that understands natural human language, this project aims to bridge the gap between technology and hospitality, offering an innovative tool for both small local businesses and large franchises to streamline their operations and elevate customer

service.

Statement of the Problem The primary problem this project addresses is the operational inefficiency and poor customer experience in restaurants caused by manual and high-friction ordering processes during peak hours. This core problem manifests in several ways:

- **Increased Service Times:** Long queues form at drive-thrus and counters as staff struggle to manage simultaneous orders.
- **Order Inaccuracy:** Miscommunication between customers and staff leads to incorrect meal preparation and customer dissatisfaction.
- **Staff Overload:** Employees are stretched thin, leading to burnout and a decline in service quality.
- **In-Car Ordering Chaos:** Customers ordering from their vehicles are often surrounded by multiple waiters, causing confusion, delays, and a disorganized service flow.

Objective(s) / Aim(s) / Target(s) The principal objectives of this project are:

1. To develop an intelligent voice assistant using AI and NLP that can process natural, conversational food orders, including complex customizations.
2. To design and implement a cross-platform mobile application for customers to place voice orders, view menus, and track their requests.
3. To build a web-based kitchen interface that displays incoming orders in real-time for chefs, ensuring clarity and accuracy.
4. To create a secure administrative portal allowing restaurant owners to register, upload, and manage their menus.
5. To integrate a multilingual NLP model capable of understanding both English and Urdu to cater to a diverse user base.

2123. CAPITAL COURSE: NAVIGATING SMARTER INVESTMENTS

Project Advisor	MR. JUNAID AZIZ
Status	In Process of Completion

Capital Course is a web-based AI/ML platform designed to provide accessible, personalized investment recommendations for beginners (students, small business owners) and intermediate investors. The system collects user profile data (budget, risk tolerance, preferred sectors/countries, and horizon), ingests and normalizes multi-source market and macroeconomic datasets (stocks, commodities, real estate, agricultural indices, macro indicators), and runs ML-based scoring and ranking to generate top 2–3 recommendations tailored to the user. Each recommendation is accompanied by a transparent “Why” (data-based reasoning: GDP trends, sector growth, price momentum, policy signals) and “Why Not” (clear risk factors). The platform includes an interactive dashboard, sliders for risk/time preferences, alternative suggestions when a recommendation is rejected, real-time alerts on major market events, and a short learning module to explain financial concepts in plain language. The system focuses on personalization, transparency, and usability to help non-experts invest confidently without expensive advisors. Expected outcomes are a working web application (frontend + backend), trained ML models for recommendation and risk scoring, demonstration of accuracy on historical data, and a UX that surfaces explainability.

2124. SHAADIBLOOM

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

Weddings in Pakistan are grand celebrations that involve a huge number of services like venues, catering, decor, photography, beauty services, and travel. Unfortunately, most existing platforms only focus on one or two of these areas, which leaves people juggling multiple websites, vendors, and endless calls. This often leads to stress, poor coordination, and mistakes. Our project, ShaadiBloom, aims to solve this by building an

all-in-one wedding planning platform. It will bring everything together like vendor bookings, real-time chat, beauty and fitness planning, dress customization, travel logistics, and even wedding insurance into one digital hub. What makes it unique is the integration of AI-powered recommendations and a smart chatbot that guides users like a personal assistant. To make it reliable, we'll collect data from minimum 30 vendors in each category (venues, beauty parlors, decor, catering, etc.), ensuring wide choices and accurate suggestions. In short, ShaadiBloom will modernize wedding planning for Pakistani culture by offering convenience, personalization, and trust in one place.

2125. MARQOOM

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

MARQOOM is an integrated digital legal-information ecosystem designed to modernize and democratize access to Pakistani law, with an initial focus on rental-housing regulation. The platform brings together multiple intelligent components into one coordinated system, including MARQOOM BOT, an AI-driven chatbot providing instant answers to legal queries; MARQOOM HOUSING DESK, a domain-specific search engine for rental law documents and procedures; MARQOOM BENCH, an interactive community forum for law-related discussions; MARQOOM RADAR & BAR PASS, career and licensing modules for law students and graduates; and MARQOOM DAILY, a legal-news aggregator offering timely updates. Technically, MARQOOM is a cross-platform application developed using React for the web interface, Flutter for the mobile interface, and a Django backend connected to a MySQL database. Its AI capabilities are powered by spaCy for Natural Language Processing (NLP). The overarching goal of MARQOOM is to create a user-friendly, secure, and scalable system that bridges the knowledge gap between the public, law students, and professionals by presenting legal information in clear, structured, and accessible language.

2126. EDBRIDGE

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

The proposed project, EdBridge, is a smart CRM-based automation and tracking system designed for educational consultants and students applying to universities in Finland, Australia, and Canada. The project addresses the significant problem of complex and time-consuming study-abroad applications, where students remain uncertain about their progress and consultants struggle with repetitive manual work, unstructured communication, and lack of centralized tools. EdBridge integrates multiple knowledge areas, including Artificial Intelligence, Web Scraping, Full-Stack Web Development, Database Management, and Email Automation. The system uses AI to analyze students' academic backgrounds and generate a personalized advisory report containing recommended universities, tuition fees, scholarships, application deadlines, living expenses, and part-time job opportunities. Real-time data accuracy is ensured through APIs (where available) and advanced web scraping tools such as BeautifulSoup, Puppeteer, and Selenium. For consultants, the platform offers a pipeline dashboard with automated stage updates (e.g., "Form Received" → "Documents Verified" → "Visa Filed") and a centralized email system for handling university communication. For students, a self-service portal allows independent progress tracking, reducing unnecessary queries and ensuring transparency. The expected results include a 60–80% reduction in

manual workload for consultants, real-time and reliable information for students, and enhanced satisfaction through transparent communication and informed decision-making. Beyond serving as an academic project, EdBridge demonstrates strong commercial potential as a scalable solution for the international education consultancy industry.

2127. INFITRON TAILORED BY INTELLIGENCE

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

Infitron is an AI- and AR-powered mobile application designed to revolutionize wardrobe management, particularly for male users. The system enables users to digitize their wardrobe by uploading images of clothing items, which are automatically categorized using AI-based image classification. It further provides personalized outfit recommendations and real-time virtual try-ons. By integrating ARCore/MediaPipe for try-ons, and external APIs such as OpenWeatherMap and Google Calendar, the application delivers context-aware outfit suggestions based on weather, events, and personal preferences. Unlike existing fashion apps, Infitron will use various Kaggle datasets as a foundation and further enhance them with a custom male-specific dataset curated and labeled by the team, ensuring improved accuracy and personalization. The expected result is a cross-platform mobile solution (Android/iOS) with AI-powered outfit recommendations, AR-based try-ons, wardrobe analytics (usage tracking, laundry cycles, donation suggestions), and a voice assistant for hands-free interaction. This innovation simplifies daily outfit choices, promotes sustainable fashion habits, and boosts confidence in styling.

2128. SMART BABY BAND: CRY & SLEEPING MONITORING SYSTEM

Project Advisor	MR. M. AMMAR HASSAN
Status	In Process of Completion

Infant monitoring poses a significant challenge for parents and caregivers, as recognizing the reason behind a baby's cry or ensuring their comfort requires constant attention. The Smart Baby Band – Cry & Sleep Monitoring System addresses this problem by providing an intelligent, real-time monitoring solution that identifies the baby's emotional and physical state through advanced sensing and machine learning techniques. The system integrates IoT-based hardware, including sensors for cry sound, motion, heart rate, and temperature, with edge computing on an ESP32-S3 microcontroller and cloud-based data analytics using Django and Firebase. A mobile application, developed with Flutter, allows parents to visualize live data, receive alerts, and review historical patterns. This project applies knowledge from embedded systems, IoT communication (MQTT), cloud integration, and AI-driven signal processing to create a reliable, low-latency, and user-friendly baby monitoring device. The expected outcome is a wearable prototype capable of detecting cry types (e.g., hunger, pain, discomfort), monitoring vital signs, analyzing sleep patterns, and sending instant alerts to ensure the baby's health and comfort.

2129. HILLSAFE AI: REAL-TIME LANDSLIDE ALERT FOR PAKISTAN

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

HillSafe AI is an intelligent early warning system that predicts landslides in Pakistan's hilly regions through machine learning models using open source datasets. The platform integrates satellite imagery, rainfall records, and terrain information to forecast risk levels in real time. Alerts are transmitted via a web and mobile dashboard to both community members and local authorities. Unlike conventional hardware heavy systems that require costly sensor installations, HillSafe AI is a purely software driven and cost effective framework. It combines Random Forest for spatial susceptibility mapping with LSTM for temporal rainfall prediction, integrating both into an ensemble engine that continuously generates risk scores and alerts. The project demonstrates how AI and data driven analytics can strengthen disaster preparedness and climate resilience in developing regions by providing timely, scalable, and low cost landslide prediction.

2130. VITAL VIEW

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

Vital View is an AI-powered mobile and web application designed to detect early signs of nail and systemic internal diseases by analyzing user-uploaded nail images. The project addresses a significant gap in accessible, early-stage medical screening tools. Utilizing a Convolutional Neural Network (CNN) model built with TensorFlow/PyTorch, the system aims to achieve 80-90% diagnostic accuracy. The frontend is developed in React Native (mobile) and React.js (web), supported by a Firebase backend for authentication, storage, and API functions. The final product will serve as an early-warning tool to prompt users to seek professional medical consultation, potentially improving health outcomes.

2131. LIFTOFF

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

Liftoff is a developer-first Deploy-as-a-Service (DaaS) platform that enables teams to launch containerized applications to real cloud infrastructure using a single configuration file and GitHub repository. It abstracts away DevOps complexity using Pulumi, GitHub Actions, and Docker, while allowing full control and transparency through Infrastructure as Code. Unlike traditional PaaS platforms, Liftoff provisions infrastructure in the user's own AWS account — enabling scalability, extensibility, and zero lock-in. The MVP will support AWS services including ECS, EKS, S3, RDS, and ALB with plans to expand to GCP and Azure.

2132. TAVI: TODDLER & ADULT VIRTUAL INTELLIGENCE

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

Autism Spectrum Disorder (ASD) impacts communication, emotional recognition, and social interaction. Current digital tools often lack multimodal adaptability, real-time interaction, and emotional awareness. Our project, TAVI – Toddler & Adult Virtual Intelligence, proposes a browser-based, emotion-adaptive platform with an interactive avatar. It integrates facial expression analysis, and text sentiment interpretation to recognize user emotions with a targeted accuracy of 90%. The avatar responds with

adaptive gestures, emotional support, and structured communication aids, offering safe caregiver integration. The platform aims to enhance emotional regulation, independence, and communication skills for individuals with ASD, making it accessible at home, in schools, and in therapy centers.

2133. TEXAI DETECT

Project Advisor	MR. M. ASIF HAROON
Status	In Process of Completion

TexAI Detect is an AI-powered fabric inspection system that automates the detection of visual defects in textiles. Manual quality control is slow, inconsistent, and prone to human error, leading to increased waste and reduced efficiency in textile manufacturing. Our project addresses this by applying computer vision and deep learning to identify defects such as stains, holes, and weaving irregularities with high accuracy.

2134. AI-BASED SMART ELECTIRC METER FOR THEFT DETECTION AND VOLTAGE ANOMALY HANDLING

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

This project proposes the design and implementation of an Advanced Smart Electricity Meter System to modernize energy infrastructure. The system addresses critical issues including electricity theft, which causes significant revenue loss, and power quality problems that damage consumer appliances. It leverages a Raspberry Pi microcontroller interfaced with voltage and current sensors to perform real-time monitoring and analysis of electrical parameters. Core outcomes include: 1. Automated theft and anomaly detection through graphical analysis 2. Instant power outage reporting 3. Automatic voltage surge/shock protection. 4. Configurable unit consumption limits 5. Automated meter reading. The final product will be a fully functional hardware prototype and a web-based dashboard for utility authorities, enhancing efficiency, transparency, and reliability in power distribution.

2135. TAILORLINK: MOBILE APP TO CONNECT WITH DESIGNERS

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

TailorLink is a mobile and web-based platform designed to modernize traditional tailoring by connecting customers with reliable designers and tailors for stitching and alteration services. Developed primarily in React Native for customers and supported by a Next.js-based Super Admin portal, the system enables users to search verified designers by location, garment type, ratings, and pricing, submit requests with measurements and deadlines, and compare quotations before booking. Integrated delivery management ensures timely pickup and drop-off, while features such as secure payments, order tracking, structured designer profiles, and in-app support provide a seamless user experience. The financial model includes a 3% service commission on completed orders and a fixed delivery charge of PKR 100, making the platform both functional and revenue sustaining. Additionally, analytics and reporting tools (Chart.js, D3.js) and deployment on

managed servers ensure transparency, efficiency, and scalability for customers, designers, delivery partners, and administrators alike

2136. AI-POWERED DYNAMIC SKILL MATCHING PLATFORM (SKILL MAPPING)

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

This project aims to develop a web-based platform that uses AI to dynamically match employees to collaborative projects based on real-time skills, availability, and project requirements. Unlike traditional static methods (e.g., job titles), the system continuously updates matches as skills evolve or project needs change. Target users include HR departments, project managers, and employees seeking skill-aligned work. The solution addresses inefficiencies in manual team formation, improving project outcomes and workforce utilization.

2137. SAFE TABLE: SMART AI FUSION EXPERIENCE TABLE

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

The S.A.F.E Table (Smart AI Fusion Experience Table) is a smart dining system that unifies AI, AR, multilingual voice ordering and payments into a seamless platform. Built with React.js and powered by FastAPI, MCP servers and MongoDB, it manages real-time orders, taxes and system connectivity. Customers can use voice commands to order, view 3D AR dish previews, make one-click payments via Stripe QR and leave voice feedback while tracking real-time kitchen updates, creating an intelligent and immersive dining experience that enhances restaurant efficiency and customer satisfaction.

2138. TRYONA: AI-POWERED VIRTUAL FITTING ROOM & FASHION ASSISTANT

Project Advisor	MR. M. REHAN SALEEM
Status	In Process of Completion

The TryONa project aims to revolutionize online clothing experiences by enabling users to virtually try on outfits through realistic 3D avatars generated from a single photo. Addressing the limitations of traditional e-commerce sizing and visualization, it integrates computer vision, machine learning, and web technologies to enhance personalization and user confidence. The system combines avatar modeling, image processing, and intelligent recommendation algorithms within an interactive web platform. By supporting both contemporary and cultural garments, TryONa promotes inclusivity and user engagement. The anticipated outcome is a functional prototype that improves online shopping accuracy, user satisfaction, and cultural representation in virtual fashion.

2139. CROPCOUNTAI: FRUITS AND VEGETABLES COUNT AND PRICE ESTIMATION

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

The project CropCountAI is designed to assist farmers, traders, and buyers by providing an easy way to count fruits and vegetables on trees, evaluate their quality, and estimate their market price. Traditionally, this process is based on rough guesses, leading to disputes and unfair deals. Our application replaces this guesswork with a reliable, AI-powered solution that works directly on smartphones. The mobile app, developed using Android Studio (Java) or Flutter, uses the phone's camera to capture images of trees. An AI model, trained in Python using TensorFlow and later converted to TensorFlow Lite, processes these images to detect, count, and assess the quality of the produce by considering factors such as size, ripeness, color, and visible damage. The app then generates an estimated market price based on local rate data. To make the system more practical, it will also include features like tree health monitoring, pest and disease detection, multilingual support, offline mode, and a history log of past scans. Along with the mobile app, a web-based admin panel will be developed. This panel allows administrators to manage users, update local market rates, and monitor app usage for better transparency. By combining mobile accessibility with centralized web management, the system ensures ease of use for farmers while keeping data organized for administrators. This project aims to provide a low-cost, user-friendly, and transparent solution that bridges the gap between traditional farming practices and modern technology, making fruit and vegetable trading more fair, accurate, and efficient.

2140. MASTER DEUTSCH: OFFLINE-FIRST GERMAN LEARNING APP (A1-B1) WITH AI TUTOR

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Master Deutsch is a cross-platform mobile application designed to teach German language from CEFR levels A1 to B1. The problem it addresses is the lack of standardized, offline-first, and free resources for learners preparing for Goethe or telc certifications. Current market apps either hide core features behind paywalls, lack depth in grammar, or do not align with official exam structures. The significance of this project lies in providing an integrated, accessible, and exam-oriented solution for students and professionals aiming to study, work, or migrate to Germany. Unlike existing tools, Master Deutsch delivers grammar, vocabulary, reading, listening, writing, flashcards, and quizzes completely offline, while also offering an optional AI tutor to clarify doubts. The AI will be fine-tuned on German grammar explanations to ensure accuracy, but it remains a supporting feature rather than the core of the app. The knowledge areas applied include mobile application development (Flutter), database management (SQLite, Firebase), artificial intelligence (LLaMA 2 fine-tuning), and software engineering principles for cross-platform systems. By sourcing CEFR-aligned and unbiased datasets, the app ensures reliable and standardized content. Expected results include a fully functional, offline-first app with synchronized user progress, a fine-tuned AI tutor achieving high response accuracy, and better learner engagement compared to existing solutions. This outcome demonstrates the feasibility of combining structured offline learning with optional AI support, offering a cost-effective alternative to fragmented and paid apps.

2141. RESQ+

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Emergency response delays due to manual accident reporting cause loss of lives. Existing AI systems detect crashes but offer limited support. Our proposed model adds real-time coordination, paramedic tools, and feedback for smarter, faster emergency management.

2142. SEMANTIX: AI-POWERED CODE, DOCUMENT & DIAGRAM PLAGIARISM DETECTION NETWORK

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

SEMANTIX proposes a self-hosted plagiarism detection system for academic submissions that combines structural program analysis and semantic embeddings to detect paraphrased or reworked source code and semantically similar documents (PDF/DOCX/PPTX). Unlike token-level detectors such as MOSS and JPlag, SEMANTIX integrates AST-based normalization and structural matching with locally fine-tuned code and sentence transformer models to capture both syntactic and semantic similarity, and produces explainable provenance reports and AI-generation indicators. No external API keys or paid third-party services will be used; all models and processing will be hosted locally. The project aims to achieve 80–85% detection accuracy for rewritten code on a curated evaluation set and deliver a working prototype, labeled dataset, and evaluation report.

2143. THE OBSIDIAN ETERNITY: GATHER THE RELICS, AWAKEN THE PORTAL, SAVE THE WORLD

Project Advisor	MR. M. UMAR HAMEED
Status	In Process of Completion

Background & Motivation. Action-stealth games blend path planning, perception, and environment interaction. Our FYP uses this genre to show applied AI (patrols, awareness, search states), systems programming (input, physics, UI), and production workflow (assets, audio, cutscenes). The narrative gives clear purpose to collecting the five relics: assembling a device that purifies pathogens and prevents global catastrophe. **Core Concept.** Five escalating missions each spotlight a key mechanic: 1. Warehouse Raid – stealth tutorial (crates, shadows, simple patrols). 2. City Van Intercept – chase & quick-time interception among traffic. 3. Police Evidence Heist – disguises, keypad/lock hacking, CCTV cones. 4. Jungle Border Escape – platforming, trap timing, multi-patrol routes. 5. Mountain Fortress – layered infiltration, boss-style encounter, multipath solutions. **Game Systems.** • **AI Guards:** Finite State Machine (Idle → Patrol → Suspicious → Chase → Search → Return) with line-of-sight + hearing thresholds; optional Behavior Tree decorators for context (cover seeking, flanking, calling backup). • **Perception:** Vision cones using frustum checks + raycasts; sound events with falloff radius; suspicion meter. • **Navigation:** Unity NavMesh for patrols, dynamic obstacles during chases, off-mesh links for climbs/jumps. • **Stealth Tools:** Disguises (restricted areas), noise decoys, light/sound awareness, hiding spots. • **Puzzles:** Lockpads (pattern/sequence), terminals (wire-connect minigame), circuit breakers (camera loops). • **Chase/QTE:** Short, cinematic sprints with simple inputs for vaulting, sliding, intercepting the van. • **Progression:** Each relic unlocks a passive bonus (e.g., longer distraction, faster hack, wider stealth meter). • **Cinematics:** Opening

hook (virus threat); ending cutscene where the assembled device emits a cleansing energy wave that disables the syndicate's payload worldwide. Production Plan (Phases). • P0 – Pre-production (2–3 weeks): Game Design Document (scope, levels, assets list), blockout of all 5 levels with gray boxes, AI prototypes in a test arena. • P1 – Core Mechanics (3–4 weeks): Player controller (walk/run/crouch/climb), stealth vision/hearing, patrol paths, suspicion meter, basic UI/HUD. • P2 – Level Pass 1 (3–4 weeks): Build Levels 1–3 to alpha; implement warehouse stealth, van chase, evidence-room heist; placeholder art and sounds. • P3 – Level Pass 2 (3–4 weeks): Build Levels 4–5; add traps, multi-path fortress, boss logic; first cinematic draft. • P4 – Polish & Optimization (2–3 weeks): Replace placeholders with Blender/Mixamo assets, lighting, post-FX; bake navmesh; occlusion culling; bug fixing; playtests; Windows build. • P5 – Documentation & Defense (final 1–2 weeks): User manual, testing report, performance metrics, trailer made in DaVinci Resolve. Tools (All Free). Unity, Blender, Mixamo, GIMP/Krita, Audacity, DaVinci Resolve; free assets (Unity Asset Store/Freesound). Evaluation & Metrics. • Playability: Tutorial completion rate $\geq 90\%$; mean level completion time matches design targets. • AI Behavior: Guards transition correctly across states; detection/false-positive rate within tuned bounds. • Performance: ≥ 60 FPS on mid-range PC at 1080p; memory stable (no leaks). • Quality: < 20 known non-blocking bugs; consistent UX and readable UI. Ethics & Safety. No real-world hacking, weapons, or government affiliation. Fictional virus; non-graphic, non-violent presentation. Risks & Mitigation. Scope creep \rightarrow stick to 5 compact levels; complex AI \rightarrow begin with FSM, add BT only if time allows; asset load \rightarrow prefer stylized low-poly to keep performance high. Result. A cohesive, story-driven stealth game demonstrating AI, systems, design, and polish suitable for FYP defense.

2144. FESTALYTICS

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

Our product, Festalytics, is a three-module AI-powered event management system that aims at streamlining and making effective the process of organizing events ranging from weddings, birthdays, and parties. The product characteristics are three-module functionality (Admin, User, Vendor) and AI functionality in the form of chatbot recommendations, auto cost estimation, calculation of food quantity, and AI-based communication with vendors. The platform bridges the distance between users and vendors by offering real-time suggestions, locational discovery of vendors, and auto-confirmations and reminders. The platform increases efficiency, reduces manual coordination, and makes overall event planning effective on all fronts.

2145. JOBJITSU: AI-POWERED SMART INTERVIEW COACH

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

Jobjitsu is an AI-driven smart interview coaching platform designed to help users prepare for professional interviews through realistic simulations and intelligent feedback. It replicates the experience of a live panel interview using AI-generated avatars representing an HR representative, a technical recruiter, and a team lead. Users interact with these avatars through voice-based responses, while the system records and analyzes both verbal and non-verbal cues. The platform uses a combination of modern AI technologies:

Whisper for real-time speech-to-text transcription, OpenCV, MediaPipe, and DeepFace for facial expression and posture analysis, and SpaCy/NLTK for natural language processing to assess verbal clarity, grammar, and filler words. Emotional tone, fluency, and confidence are also gauged to provide a holistic performance review. Users can upload resumes or preparation notes, and the integrated chatbot can summarize, review, and suggest personalized improvements. After each session, Jobjitsu delivers detailed AI-generated feedback on parameters such as tone, clarity, articulation, eye contact, and emotional expression. All feedback is stored and visualized in a dashboard to track progress over time. With support for domain-specific interview paths (e.g., AI, Backend, Frontend), Jobjitsu adapts questions and scenarios to match the user's career goals. By combining voice input, computer vision, NLP, and generative AI, the platform provides an immersive, interactive, and data-driven preparation experience for job seekers.

2146. PROTONS EDUVERSE

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

Protons EduVerse is a web-based platform designed to streamline the study-abroad application process for Pakistani students. The current process is fragmented, costly, and stressful due to reliance on multiple consultants and unverified resources. Our platform integrates program search, deadline tracking, test preparation, SOP/essay assistance, and admission prediction into one unified solution. With AI-powered writing support and machine learning predictors, EduVerse reduces costs, improves success rates, and fosters an equitable, community-driven environment for study-abroad applicants.

2147. REMIND: GENERATIVE AI BASED MEMORY REBUILDER

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

ReMIND is a web-based application designed to assist individuals experiencing memory loss disorders such as Alzheimer's and dementia. Existing tools depend largely on patient or caregiver recall and often fail when little or no information is available, leading to emotional stress and reduced quality of care. ReMIND addresses this gap by integrating multiple data sources, including text notes, photos, and voice recordings, to reconstruct daily events in a semi-automated manner. The system employs AI-driven clustering and reconstruction techniques to transform fragmented inputs into coherent stories and immersive experiences, supported by reminders and notifications for patients and caregivers. Built with a lightweight and accessible architecture, the platform is designed for elderly-friendly use and optimized for low-spec devices common in developing regions. The outcome is a functional prototype that demonstrates feasibility through proof-of-concept, showing how AI can bridge emotional gaps, reinforce memory, and preserve cherished experiences in a secure, user-focused manner.

2148. TACT-EVAC

Project Advisor	MR. M. ZULKIFL HASAN
Status	In Process of Completion

The TACT-EVAC project proposes a virtual, AI-driven system for the autonomous evacuation of high-value military assets (e.g., fighter jets and missile carriers) from airbases during sudden enemy attacks. The system utilizes a Unity 3D simulation where virtual cameras, leveraging computer vision (OpenCV/YOLOv8), detect immediate threats like explosions or obstructions. Upon a "Red Alert," assets are prioritized based on importance, and dynamic safe paths are computed using A* and Dijkstra pathfinding algorithms. Virtual robotic vehicles then execute the evacuation by towing assets to the nearest bunkers. TACT-EVAC serves as a critical proof-of-concept, combining AI, simulation, and real-time path planning to demonstrate a safer, smarter, and fully autonomous crisis management workflow for future military readiness.

2149. DEEPMODEL FORENSICS VIA FRACTAL TEXTURE ANALYSIS

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Deepfake technology is increasingly threatening the authenticity of digital media by creating highly realistic manipulated videos and images. This project aims to develop an explainable deepfake detection system that uses fractal texture analysis to identify anomalies at the micro-texture level. Unlike black-box AI systems, our approach highlights manipulated regions through heatmap visualizations, making results transparent and easy to interpret. The system will analyze both images and short video clips, offering practical forensic value for journalists, investigators, and researchers.

2150. WITCH'S RIDE: REALMS OF MAGIC AND STARS

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Witch's Ride is a mobile fantasy and space game where players fly a magical broom using mobile sensors. Players navigate through rings to gain speed and power, switch between 2D or may 3D flight challenges, and follow a story about restoring balance across enchanted and cosmic realms. The game focuses on sensor-based controls, smooth mobile performance, and varied levels with rising difficulty.

2151. WHEELS OF WAR: FUTURISTIC VEHICULAR COMBAT GAME

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Wheels of War is a futuristic vehicular combat game set in a post-apocalyptic world where survival has evolved into a brutal sport. Players battle in high-octane arenas, controlling customizable, weaponized vehicles equipped with adaptive power-ups. The game combines PvE (player vs. AI) challenges with PvP (1v1, team battles, and free-for-all) modes, ensuring replayability and competitive engagement. The project addresses limitations in existing vehicular combat games, such as repetitive mechanics, a lack of deep customization, and an absence of adaptive gameplay. Using Unity, Blender, Substance Painter, and FMOD, we aim to deliver a scalable, globally competitive product showcasing Pakistan's talent in game development.

2152. AGRIZON

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

Agriculture serves as a fundamental component of numerous economies, but farmers encounter various obstacles that significantly impact their productivity and profits. Conventional farming practices depend largely on human knowledge to identify plant diseases, pest issues, and soil fertility concerns. Sadly, many small-scale farmers cannot keep up with regular consultations with agricultural specialists. Consequently, diseases are frequently identified too late, resulting in substantial crop losses. One major concern is soil deterioration resulting from the ongoing cultivation of the same crop without adequate rotation. This method exhausts nutrients, diminishes long-term fertility, and compels farmers to rely on excessive fertilizers, raising costs and damaging the environment. Many farmers also struggle to access precise weather forecasts specific to their areas. Sudden changes in weather, such as unexpected rain, extreme heat, or droughts, can devastate crops within days. Without timely notifications, taking preventative action becomes nearly impossible. Economically, numerous farmers are reliant on middlemen who take advantage of them by offering very low prices for their harvests while selling supplies (seeds, fertilizers, pesticides) at inflated costs. This leads to an economic disparity, trapping farmers in a cycle of poor profits and substantial debts.

2153. SMART SECURE MEDITATION ADVISOR-PATIENT CARE FRAMEWORK WITH AI VIRTUAL HELPER AND RPPG-BASED HEALTH TRACKING

Project Advisor	MR. MUHAMMAD BASIT ALI GILANI
Status	In Process of Completion

In this project, a webcam and Remote Photoplethysmography (rPPG) are used to estimate stress levels, heart rate (BPM), and oxygen saturation (SpO_2) in a non invasive, AI-based health monitoring system. Physical sensors like pulse oximeters, which are frequently expensive and invasive, are no longer necessary with the suggested system. The system uses a combination of MediaPipe, OpenCV, and machine learning models to predict vital signs by extracting facial color variations. Real-time readings, color-coded indicators, and confidence scores are shown on a desktop GUI built on the Tkinter framework. Additionally, data is recorded for the purpose of creating and reviewing reports. This framework provides an accurate, contactless, and economical monitoring solution, supporting telemedicine and digital health.

2154. ORGANIC MANDI

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

OrganicMandi is a Flutter-based mobile application designed to provide fresh, organic milk and livestock-related services to urban residents, particularly in big cities such as Lahore. Consumers currently face difficulties in accessing trustworthy organic milk and dairy products, often relying on packaged milk or unreliable vendors. OrganicMandi solves this by enabling customers to order cow, buffalo, goat, or camel milk through monthly subscriptions (morning/evening delivery slots) or urgent on-demand delivery. In addition, the app offers dairy by-products (yogurt, ghee, sweets), fresh meat, poultry

delivery, and livestock listings for sacrificial purposes (Aqiqah, Eid Qurbani), where users can bid on animals uploaded by registered sellers. The platform also provides pet care services, including AI-based symptom checking, doctor-on-call consultations, and delivery of pet food and accessories. The system incorporates multiple roles: customers, sellers, delivery riders, and veterinary doctors, with secure verification, multi-platform payment integration (Easypaisa, JazzCash, bank transfer), delivery confirmation, and complaint management. The project addresses real-world challenges of trust, accessibility, and convenience while opening opportunities for scalable business expansion in Pakistan's organic and livestock sector.

2155. MUAWIN: SMART VERIFIED HOUSEHOLD SERVICES PLATFORM

Project Advisor	MR. MUHAMMAD BILAL KHAN
Status	In Process of Completion

Muawin – Smart Verified Household Services Platform is a mobile app that connects customers with verified household service providers and local vendors. It uses AI (OpenCV, DeepFace, Dialogflow) for CNIC verification, smart matching, and chatbot interaction. The platform offers bilingual (Urdu + English) voice support, real-time tracking, and SOS safety features to ensure secure and reliable service booking. An admin dashboard manages verifications, complaints, and analytics to maintain trust and accountability.

2156. THE MANOR CYCLE: A LOOP-BASED SURVIVAL HORROR GAME (ANDROID)

Project Advisor	MR. MUHAMMAD NAEEM SABIR
Status	In Process of Completion

The Manor Cycle is an Mobile-based survival horror game that integrates psychological tension, environmental unpredictability, and an adaptive enemy AI system. Players are trapped in a 24-hour time loop inside a mysterious manor where daytime is for preparation and nighttime unleashes a relentless monster. Unlike conventional horror games that rely only on jump scares, The Manor Cycle introduces adaptive AI that learns from player strategies across multiple loops, altering enemy behavior and forcing dynamic survival tactics. The project addresses the lack of depth, strategic gameplay, and adaptive AI in current mobile horror titles by combining procedural environment changes, survival mechanics, and AI adaptation. The end product will be a playable Android game demonstrating innovation in adaptive AI, mobile optimization, and immersive horror design.

2157. OPERATION ZARB-E-AZB

Project Advisor	MR. MUHAMMAD NAEEM SABIR
Status	In Process of Completion

Operation: Zarb-E-Azb is a patriotic single-player 3D tactical shooter inspired by the real events of Operation Zarb-e-Azb. Set in Pakistan's tribal northwest, the game follows a fictionalized but deeply grounded storyline depicting the country's military efforts against terrorism. The narrative centers around Sergeant Ismail, a newly recruited special service forces (SSG) operative, guided by Captain Basit and Lieutenant Moiz. The game includes

an interactive tutorial and three mission-based levels, each based on real declassified events but adapted with fictional characters and dramatized sequences for depth. The design draws heavy inspiration from Call of Duty: Modern Warfare (2019) in both tone and mechanics with featuring mid-poly assets, realistic movement, and immersive mission briefings. All names and character identities are fictionalized to ensure cultural sensitivity and avoid political implications, while real locations and timelines maintain historical relevance.

2158. EDU-TEST

Project Advisor	MR. MUHAMMAD NOMAN
Status	In Process of Completion

EduTest is a gamified educational quiz platform designed for Pakistani students preparing for competitive exams such as MDCAT, ECAT, CSS, PMS, and PPSC. It addresses the lack of engaging and accessible digital learning tools by offering a cross-platform 2D quiz game with both online and offline functionality. Unlike traditional quiz apps, EduTest provides intelligent feedback, adaptive question recommendations, and gamified elements such as levels, rewards, and timed challenges to improve motivation and retention. The project integrates multiple knowledge areas including Unity-based game development, Artificial Intelligence via the ChatGPT API, database management, and human-computer interaction. By combining AI-driven explanations with a curated question bank, EduTest delivers a personalized and effective learning experience. The final product will serve as both an innovative learning tool and a demonstration of how AI and game design can be applied to improve educational technology and exam readiness.

2159. SMART DINE: AI-POWERED DINING MANAGEMENT SYSTEM FOR FOOD COURTS & RESTAURANTS

Project Advisor	MR. MUHAMMAD NOMAN
Status	In Process of Completion

Smart Dine is a web-based dining management system designed to solve the major issue of long waiting times and poor table management in food courts and restaurants. Customers often occupy tables without ordering, creating frustration for others who cannot find seating, especially during peak hours. Our system introduces a digital solution that manages table allocation, order handling, and customer flow efficiently. Using a QR code system, customers can access the Smart Dine app to place orders, view real-time order progress, and track their sitting time. A newly added feature provides a central QR code for waiting customers so they can see which tables are currently free and which will soon become free based on remaining sitting time. This transparency improves customer experience and reduces confusion. AI/ML integration supports personalized menu recommendations and predictive table availability, while managers and staff benefit from dashboards that display real-time table status, upcoming free tables, order management, and analytics. The system ensures operational efficiency, reduces delays, and increases customer satisfaction.

2160. COURTSAVE: AI-POWERED SPORTS FACILITY BOOKING PLATFORM

Project Advisor	MR. MUHAMMAD NOMAN
Status	In Process of Completion

CourtSave is a sports facility booking platform designed to modernize venue reservations in Pakistan. It solves common issues such as double bookings, lack of online payments, and poor communication between players and facility managers. The platform includes real-time booking synchronization, secure online payments, smart location search, social booking with cost-splitting, and QR-based check-ins. It also offers coach/trainer booking and an equipment rental marketplace. A lightweight AI layer is used for simple natural language venue discovery and basic matchmaking suggestions. CourtSave will improve booking efficiency, reduce conflicts, and enhance user satisfaction. The final product will be a mobile + web application with a strong backend, automated notifications, and admin analytics dashboard.

2161. AI-BASED CROSS PLATFORM INTERACTIVE NPC AVATAR SYSTEM FOR ADVOCATE TRAINING AND LEGAL DEBATE

Project Advisor	MR. MUHAMMAD TAUSEEF HANIF
Status	In Process of Completion

This project aims to develop an AI-based NPC Avatar Training System that enables law students and advocates to practice real courtroom procedures in an interactive and engaging way. The system allows users to choose their role as either Defence or Prosecution, while an intelligent Opponent NPC Lawyer, represented through an avatar with voice, presents objections and counterarguments. A virtual Judge evaluates the participant's responses based on accuracy, confidence, clarity, and timing, and provides a detailed performance report with constructive feedback. The platform includes features such as speech input/output, avatar interaction, and an optional chatbot assistant for pre-session practice and personalized learning. By combining AI-driven dialogues, performance evaluation, and realistic courtroom environments, the system provides a practical and repeatable training experience that enhances students' advocacy skills and readiness for real legal proceedings.

2162. LEGALEASE AI: AI LEGAL DOCUMENTS SIMPLIFIER

Project Advisor	MR. MUHAMMAD TAUSEEF HANIF
Status	In Process of Completion

LegalEase AI is a cross-platform, multi-agent system designed to automate and streamline legal workflows such as contract analysis, petition drafting, legal consultation booking, and cybersecurity awareness. The system leverages AI and NLP models (LegalBERT, SBERT, and T5) for clause classification, risk assessment, and petition generation. It integrates modules including document parsing, precedent retrieval, cybersecurity agent, and a retrieval-augmented chatbot, ensuring secure and efficient legal process automation for law firms and clients.

2163. STYLESENSE.AI: AI-POWERED PERSONALIZED OUTFIT RECOMMENDATION SYSTEM BASED ON BODY TYPE, WEATHER, OCCASION AND WARDROBE DATA

Project Advisor	MR. MUHAMMAD TAUSEEF HANIF
Status	In Process of Completion

StyleSense.AI is a cloud-based intelligent outfit recommendation system designed to simplify the process of selecting stylish and appropriate clothing. Unlike existing solutions, it integrates advanced features such as body-shape detection, wardrobe digitization, AR try-on, weather-based suggestions, and calendar syncing within a single scalable platform. The system leverages cloud infrastructure to ensure secure data storage, cross-device availability, and real-time performance. Potential risks such as privacy, cloud dependency, and user adoption are mitigated through encryption, redundancy, and anonymization. By combining innovation, practicality, and robust deployment, StyleSense.AI provides a unique solution for modern, personalized fashion management.

2164. TRUCKIFY.PK: AI-DRIVEN LOADBOARD

Project Advisor	MR. MUHAMMAD TAUSEEF HANIF
Status	In Process of Completion

Truckify.pk is Pakistan's first AI-powered load board platform designed to modernize the trucking industry by replacing outdated, manual practices with intelligent, data-driven solutions. The system applies machine learning, predictive analytics, and natural language processing to enable smart load matching, dynamic pricing, route optimization, and fraud detection. With features such as Urdu voice support and trust scoring, Truckify ensures accessibility for local drivers and builds transparency across stakeholders. The project leverages tools including Nextjs, TensorFlow, PostgreSQL, and Google Maps API. Expected outcomes include reduced idle time, lower costs, improved earnings for drivers, and a more efficient, reliable logistics ecosystem in Pakistan.

2165. PACKIFY: AI-POWERED CUSTOM PACKAGING WEBSITE

Project Advisor	MR. MUHAMMAD TAUSEEF HANIF
Status	In Process of Completion

Packify is an innovative e-commerce platform designed to revolutionize the custom packaging industry by enabling users to create and order packaging boxes with real-time 3D previews and AI-generated designs. It empowers customers to personalize boxes based on dimensions and aesthetics using natural language prompts. The system integrates Three.js for 3D visualization and AI APIs (OpenAI DALL-E / Stable Diffusion) for real-time design generation. Customers can also use the Smart Scan feature to capture product images and automatically calculate dimensions using computer vision. The platform combines e-commerce with advanced technologies, reducing uncertainty, production errors, and costs, while providing a seamless packaging customization experience. Introduction and Background Packaging plays a vital role in branding, marketing, and customer satisfaction. Small businesses and startups face difficulties in

ordering custom packaging due to bulk requirements, high costs, long lead times, and limited design flexibility. Traditional platforms offer only static previews and manual artwork uploads, leaving users uncertain about final outcomes. With growing demand for personalized packaging, there is a strong need for an interactive, intelligent, and accessible solution. Packify addresses these challenges by combining AI-powered design generation, 3D visualization, and smart dimension scanning to provide a modern packaging customization platform. Packify combines the practical aspects of an e-commerce system with advanced technologies such as AI and 3D rendering, creating a powerful tool for individuals and businesses looking for fast, creative, and cost-effective packaging solutions. Additionally, Packify will introduce an innovative “Smart Scan” feature, allowing users to capture their product using their device’s camera. The system will estimate the dimensions (width, height, depth) automatically through computer vision, helping users quickly find or customize the right box size

2166. LIBRALEARN: CONVERSATIONAL AI FOR LEARNING HUMAN RIGHTS AND RESPONSIBILITIES

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

A significant portion of the population particularly youth still unaware with their fundamental human rights [1]. This lack of awareness often results in social exclusion and vulnerability to injustice. As Calderón-Almendros explains, being deprived of knowledge about rights further deepens inequality and prevents individuals from exercising their freedoms effectively [1]. The proposed project, LibraLearn, aims to bridge this gap by creating an AI-driven platform that delivers human rights education in a simple, interactive, and relatable form. Using Unreal Engine MetaHuman, realistic avatars will be designed to represent digital educators, while D-ID APIs will animate these avatars with natural speech and facial expressions. Conversational AI will provide scenario-based guidance, supported by multilingual and text-to-speech features, ensuring accessibility for diverse audiences. By transforming complex legal texts into engaging conversations through lifelike avatars, LibraLearn seeks to raise awareness among populations who would otherwise remain uninformed. The platform is expected to empower individuals by making human rights knowledge approachable, memorable, and widely accessible

2167. HASSLE FREE: AI-POWERED CAREER ENHANCEMENT AND RECRUITMENT PLATFORM

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

HASSLE FREE is an AI-powered cross-platform app that connects job seekers and employers through intelligent career tools. It enhances recruitment with AI-driven mock interviews, skill assessments, and automated job matching. Using NLP-based resume parsing and semantic matching, it ensures more accurate candidate-job alignment. Features like candidate scoring and badges offer transparent feedback, while employers gain automated shortlisting and customizable assessments. Overall, HASSLE FREE improves hiring efficiency, quality, and fairness—benefiting students, SMEs, and society through a scalable, transparent recruitment ecosystem.

2168. DERMADECT PRO

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

DermaDetect Pro is an AI-powered web application designed to detect eczema, psoriasis, and melanoma in real time. Pakistan faces a shortage of dermatologists and less public awareness about skin diseases [1]. Many patients misdiagnose eczema or psoriasis as minor rashes while deadly conditions like melanoma often go undetected until late stages. Rural populations, with limited access to specialists, are especially at risk. Our proposed system will offer multilingual support (English/Urdu) to help local community. DermaDetect Pro is an AI-powered web app that lets patients upload skin photos, get instant risk assessments and receive guidance for self-care. The project aims to assist dermatologists to reduce delays and improves access to early skin disease detection.

2169. PATHWISE

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

PathWise is a mobile application designed to help individuals prepare effectively for job interviews by focusing on real-time feedback and career readiness features. The app provides interview practice across three major domains: HR, Technical, and Marketing. Using AI-driven facial expression and voice analysis, PathWise gives instant feedback with emotion heatmaps, voice modulation graphs, and personalized performance tips. In addition to interview practice, the application includes resume building, skill auditing, growth history tracking, and real-time job alerts. These combined features reduce interview anxiety, boost confidence, and help individuals stay informed about relevant career opportunities. The outcome is a four-in-one solution that empowers individuals to improve their interview performance, enhance their professional profiles, and make timely and well-informed career decisions.

2170. ANXICODE: BATTLING CODE ANXIETY TOGETHER

Project Advisor	MR. MUNEEB ALI MUZAFFAR
Status	In Process of Completion

AnxiCode is a cross-platform gamified coding platform designed to help developers overcome code anxiety through engaging code battles, real-time debugging quizzes, and community-based learning. The system uses Docker and Kubernetes for scalable language-based container management and AI-based evaluation to provide personalized feedback and performance scoring.

2171. UCP-ACADEMIC NAVIGATOR (U.A.N)

Project Advisor	MR. NASRULLAH JALEEL
Status	In Process of Completion

U.A.N. (UCP-Academic Navigator) is a mobile application exclusively designed for UCP students. Using OCR (Optical Character Recognition) and AI-powered chatbots, it analyzes a student's transcript and provides personalized academic guidance. For students in good standing, it recommends remaining courses, electives, and graduation pathways.

For students on probation, it offers strategic recovery suggestions, such as which courses to repeat and in what order.

2172. MUFTISAAB: AN AI-POWERED ISLAMIC CHATBOT

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

MuftiSaab is an AI-powered chatbot designed to provide authentic Islamic answers (current aimed) based on the Hanafi school of thought. It addresses the lack of accessible and trustworthy religious guidance by combining curated Islamic sources (Quran, Hadith, and fatwas etc) with modern AI techniques such as Retrieval-Augmented Generation (RAG). Users can select their fiqh school, ask questions in natural language, and receive responses with the source. Scholar validation and user feedback ensure accuracy and reduce misinformation. The system serves as an educational platform, bridging traditional scholarship with AI, while clarifying that it does not replace a qualified Mufti.

2173. AI BASED RICE TYPE DETECTION USING DEEP LEARNING AND CAMERA VISION FOR SMART AGRICULTURE USING MOBILE APP

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

AgriRiceAI is an AI-powered smart agriculture platform that automates rice grain quality inspection using deep learning and computer vision. By leveraging mobile cameras and intelligent models, the system can detect defects, classify grain quality, and provide real-time insights to farmers and rice mills. This solution replaces manual inspection, making the process faster, more accurate, and cost-effective. AgriRiceAI empowers the rice industry with scalable, data-driven tools to improve crop quality, reduce losses, and enhance supply chain efficiency.

2174. TASKNOMIC: SMART TASK ORGANIZER WITH BUILT-IN BUDGET AND EXPENSE CONTROL

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

People often use separate apps to manage tasks and finances, which creates a disconnect. Task managers focus on productivity but ignore financial impact, while budgeting tools track expenses but do not consider workload or deadlines. This gap often leads to stress, missed payments, and poor planning. The significance of this problem is clear: productivity and financial health are closely linked, yet most tools fail to combine them. Our project, TaskNomic, addresses this by offering a single platform for both web and mobile. Its core feature, the MindFlow engine, adapts to each user's routine. It analyzes productivity patterns, balances workload with financial pressure, and detects unusual changes such as overspending or a sudden drop in task completion. To achieve this, TaskNomic uses knowledge areas such as machine learning, natural language processing, and smart data capture (OCR, voice input, email and SMS parsing). The expected

outcome is a system that improves productivity, strengthens financial control, reduces stress, and helps users maintain a balanced lifestyle.

2175. SMART ELECTRICITY BILL PREDICTION SYSTEM (SEBPS)

Project Advisor	MR. NUMAN ASLAM
Status	In Process of Completion

Electricity billing in Pakistan is highly unpredictable and financially burdensome, particularly during the summer when consumption spikes and tariff rates increase. Consumers currently lack intelligent tools to forecast bills or proactively manage energy use. Our project develops a web-based platform that integrates optical character recognition (OCR), automated data retrieval, and machine learning to provide accurate bill forecasting and consumption management. By extracting consumer IDs from uploaded bills, retrieving one year of historical billing data from LESCO, and applying predictive modeling, the system estimates upcoming bills with greater accuracy. Real-time projections are enabled by comparing current meter readings with the last bill, while a budgeting module allows users to set financial limits and receive appliance-specific recommendations. The expected outcome is an interactive dashboard that empowers households with accurate forecasts, usage insights, and energy-saving strategies. This localized solution addresses a critical gap in Pakistan's utility ecosystem, combining AI, automation, and data analytics to enhance financial planning and promote energy efficiency.

2176. DIGIWILLGUARD: LOGOUT WITH DIGNITY

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

DigiWillGuard addresses the critical, growing problem of digital legacy management. As individuals accumulate vast digital assets (social media, cryptocurrencies, emails), the lack of a secure, automated plan for their posthumous handling creates emotional, legal, and security challenges for families. Current solutions are manual, executor-dependent, and lack integration with digital services. This project proposes a robust, AI and blockchain-powered platform. It allows users to define instructions for their digital assets. The core innovation lies in leveraging blockchain technology to ensure that user instructions are stored and managed in a secure, transparent, and tamper-proof manner, while AI monitors user inactivity to trigger execution at the right time. This combination eliminates reliance on central authorities, enhances trust, and provides a dignified, reliable solution for digital estate planning.

2177. PUREPICK: AI-POWERED PRODUCT SAFETY & INGREDIENT SCANNER WITH PERSONALIZED HEALTH ASSISTANT

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Project PurePick is a mobile application that uses AI and machine learning to provide smart product recommendations. It leverages NLP for understanding user preferences and

OCR for scanning product information, ensuring personalized, accurate, and efficient selection for users.

2178. MINDMAPME: ADHD-FRIENDLY PRODUCTIVITY & JOURNALING APP POWERED BY AI

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Managing daily tasks and maintaining focus are significant challenges for individuals with Attention Deficit Hyperactivity Disorder (ADHD). Existing productivity and journaling applications are often too generic, requiring high manual effort and failing to address ADHD-specific struggles such as unstructured thinking, difficulty in task initiation, and mood regulation. MindMapMe proposes an AI-powered productivity and journaling assistant that leverages a fine-tuned Large Language Model (LLM) to directly address these challenges. Users will record quick voice notes, which will be transcribed into text using a speech-to-text system. The fine-tuned LLM will then convert these unstructured notes into structured tasks, journals, and mood insights, trained specifically on ADHD-related data to ensure relevance and accuracy. To improve time management and reduce cognitive load, the system will integrate with the Google Calendar API, automatically aligning extracted tasks with schedules. Additionally, the Weather API will be used to provide context-aware productivity recommendations, acknowledging that environmental conditions can influence focus and motivation. The outcomes of this project will include: 1. A fine-tuned LLM model adapted to ADHD-related journaling and productivity data. 2. A mobile application with an ADHD-friendly interface that supports voice journaling, smart scheduling, and contextual insights. 3. A research contribution that demonstrates how domain-specific fine-tuning of LLMs enhances the usefulness of AI-powered productivity systems for neurodiverse users. By narrowing its scope to fine-tuned LLM-based journaling and productivity support, MindMapMe offers a focused, innovative, and practical solution with both academic and market relevance.

2179. SHOPISPY: AI-POWERED COMPETITOR INTELLIGENCE TOOL

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Shopispy is an AI-powered competitor intelligence platform designed for Shopify merchants, brand owners, and eCommerce marketers. The project addresses the limitations of existing competitor-tracking tools, which either provide raw, fragmented data or require extensive manual interpretation. By combining store monitoring with advanced artificial intelligence, Shopispy transforms competitor activity into actionable strategies. It detects product launches, price changes, and installed apps/themes, while also providing AI-driven insights such as best-seller detection, trend surge forecasting, and competitor strategy classification. The significance of this project lies in reducing information overload and enabling small-to-medium Shopify businesses to make informed, timely decisions. Knowledge areas applied include artificial intelligence, data mining, natural language processing, time-series analysis, and full-stack software development. The expected result is a web application that acts as a decision-making

assistant, that empowers businesses to react faster, outperform competitors through real-time monitoring, smart recommendations, and strategic guidance.

2180. BOOK A PLAY: AI-DRIVEN SMART BOOKING & DISCOVERY PLATFORM FOR INDOOR SPORTS VENUES

Project Advisor	MR. QAISER HABIB
Status	In Process of Completion

Book-a-Play is an AI-driven mobile application designed to simplify the process of discovering and booking indoor sports venues. It connects players with suitable venues and teammates by offering real-time availability, personalized recommendations, and smart matchmaking. The system also assists venue owners in optimizing slot utilization through dynamic pricing and analytics. By bridging the gap between players and venue managers, Book-a-Play aims to create a smarter, more efficient, and enjoyable indoor sports experience.

2181. VISIO NOCTURNA: AN EVER-CHANGING ROGUELIKE

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

Visio Nocturna is a roguelike cosmic horror game that tackles the common issues of repetitive gameplay loops and shallow progression in roguelikes. The game introduces mechanics like a Bounty System that reduces grind by letting players skip repetitive runs and train against stronger foes; a Butcher/Operator NPC that offers a corruption-life trade-off, adding strategic depth; and a Semi-Nemesis System that ensures enemies dynamically adapt to player skill, creating unique challenges each run. Combined with procedural level generation, corruption mechanics, and layered storytelling, these systems not only enhance replay ability but also drive narrative progression. The expected outcome is a playable prototype that demonstrates how adaptive systems and dynamic storytelling can enhance both replay ability and emotional depth, offering players a horror experience where narrative and mechanics evolve together.

2182. ZABAR COLLAB

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

In Pakistan, influencer marketing has grown rapidly but remains highly informal, unstructured, and inefficient. Most collaborations between micro-influencers and small businesses are conducted through personal messages on platforms like Instagram or WhatsApp, lacking proper contracts, campaign tracking, or accountability. This leads to disputes, poor execution, and missed growth opportunities. ZABAR Collab is proposed as a cross-platform mobile and web application designed to professionalize influencer brand collaborations. Built with Flutter for mobile, modern frameworks for web, and Firebase as the backend, the platform integrates AI-powered matchmaking, automated digital contract generation, in-app campaign management, and support for local payment systems such as JazzCash, EasyPaisa, and Raast. With an inclusive design in Figma, the solution also supports Urdu and English, ensuring accessibility across diverse user

groups. The project leverages knowledge areas from software engineering, mobile and web development, databases, artificial intelligence, UI/UX design, cloud computing, API integration, and data analytics. By the end of the project, the expected outcome is a fully functional Minimum Viable Product (MVP) that allows influencers and businesses to create profiles, find structured matches, generate digital agreements, manage campaigns, and monitor performance metrics. By addressing the gap in structured influencer marketing at the community level, ZABAR Collab not only provides a solution for the academic scope of this project but also carries the potential to evolve into a commercially viable startup, empowering small businesses and micro-influencers to thrive in the digital economy.

2183. SHADOW OASIS

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

Shadow Oasis is a 3D adventure-survival game that unites cinematic storytelling, adaptive AI, and dynamic environments to enhance immersion and replay ability. The project addresses the common limitation in modern games where visuals and mechanics lack narrative cohesion. Built using Unity 3D, Unreal Engine, and Blender, the game spans three levels, Neon Rush, Phantom Manor, and Blizzard Bastion, each offering distinct challenges through PvE mode Drawing on knowledge from artificial intelligence, computer graphics, and game development, Shadow Oasis focuses on intelligent environment adaptation, procedural traps, and evolving player interactions. The expected result is a playable prototype that demonstrates strong technical implementation and storytelling synergy, providing a uniquely repayable and immersive experience.

2184. PREDICTING PTSD SEVERITY AND MONITORING THERAPY PROGRESS USING AI AND MBCT

Project Advisor	MR. SYED M. MUJTABA HASSAN
Status	In Process of Completion

This project aims to develop an AI-based system that predicts the severity of PTSD (Post-Traumatic Stress Disorder) and monitors therapy progress in trauma-affected individuals. The system will use self-reported questionnaires (e.g., PTSD and depression scales), therapy logs, patient journals, and chatbot responses to collect data. It will apply a custom-trained deep learning model to analyze the data, predict current symptom severity (mild, moderate, or severe), and track changes over time. Unlike traditional static approaches, the system will include an adaptive chatbot that interacts with patients according to their personality and condition, as well as support for live video therapy sessions with professionals. Sentiment analysis will be applied to journals and conversations to monitor emotional state and therapy effectiveness. The goal is to support mental health practitioners and trauma survivors by offering interactive tools, emotional tracking, and visual reports. The application will be built using Python and Streamlit, with dashboards showing symptom changes, mood trends, and therapy progress.

2185. SCHEDZO: AI-POWERED CONTENT AND EVENT SCHEDULER

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

Schedzo is a web-based AI-powered platform that unifies content creation, post scheduling, and event planning into a single system. It uses Natural Language Processing (NLP) models for generating social media captions and ML models for image creation. Through APIs like Ayrshare (for social media posting) and Zoom (for event management), Schedzo streamlines workflows that are otherwise fragmented across multiple tools. This project targets content creators, marketers, and small businesses, enabling them to save time, maintain consistency, and improve productivity in digital engagement.

2186. LAUNCH PULSE

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

LaunchPulse is an AI-powered decision support system designed to analyze and predict the success potential of business ideas. The platform evaluates user-submitted ideas by categorizing them into relevant industries and assessing factors such as market demand, innovation, scalability, and competition. Using machine learning and predictive analytics, LaunchPulse generates a success probability score and provides data-driven insights to help entrepreneurs refine their ideas. It also offers improvement suggestions based on current and future market trends. The system aims to reduce startup failure rates by assisting users in making informed business decisions before market entry

2187. MUSCLE MATES FITNESS

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

Muscle Mates Fitness is an AI-powered virtual fitness assistant that addresses the problem of incorrect exercise form, lack of personalization, and low motivation in home workouts. While similar apps exist, our key innovation is real-time angle-based pose detection using computer vision to ensure proper posture and reduce injury risk. The system adapts workouts and diet plans based on the user's mood, offering a personalized and emotionally responsive fitness experience. It also includes multimedia guidance (images and videos) and progress tracking for better engagement. This project applies knowledge in computer vision, machine learning, full-stack development, and human-computer interaction. The end result will be a cross-platform mobile and web app that delivers safer, smarter, and more personalized training.

2188. FLORAVIE: AI-POWERED WOMEN'S HEALTH & WELLNESS PLATFORM

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

Floravie is an AI-based women's health and wellness platform designed to help women manage their physical and emotional well-being. It integrates mood and symptom tracking, an empathetic chatbot, and a private community forum to provide personalized health insights.

2189. RENTOPIA: A RELA-TIME RENTAL PLATFORM WITH LIVE FEEDS AND AI INTEGRATION

Project Advisor	MR. SYED NISAR BALTI
Status	In Process of Completion

Rentopia is an AI-driven online rental marketplace for rooms and cars. It focuses on transparency, trust, and user convenience by integrating secure payments, live video verification, intelligent recommendations, fraud detection, and offline navigation into a unified solution. The platform uses Flutter for cross-platform frontend, Firebase as the exclusive backend, WebRTC for live client–agent video verification, and AI/ML models for recommendations, fraud detection, and KYC verification. The expected result is a secure, scalable, and reliable rental application that enhances user trust and accessibility.

2190. FLAIRAI: AI-POWERED CONTENT SUITE FOR MARKETING AUTOMATION

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

FlairAI is an AI-powered marketing automation suite designed to help small and medium-sized enterprises (SMEs) optimize their digital marketing efforts. Many SMEs face challenges in managing content creation, campaign execution, and performance analysis due to limited resources. FlairAI leverages natural language processing (NLP) and machine learning (ML) to automatically generate marketing content, manage multi-channel campaigns, and deliver actionable analytics. By automating repetitive marketing tasks and providing data-driven insights, the system aims to reduce operational costs, save time, and enable SMEs to compete more effectively in the digital marketplace.

2191. SAFE HAIR: AI-POWERED PERSONALIZED HAIR FALL & SCALP DISEASE DIAGNOSIS

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

SAFE HAIR is an AI-powered web and mobile application designed to help users diagnose hair loss and scalp diseases, estimate hair graft requirements for transplant planning, and connect with registered specialists. The system leverages computer vision and machine learning for scalp image analysis, offers disease awareness and recommendations, and simplifies the consultation process. This project addresses gaps in existing solutions by integrating diagnosis, treatment planning, and specialist access into a single platform.

2192. TECHFINDER AI: AI-POWERED WEB APP FOR TECH SHOP DISCOVERY IN PAKISTAN

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

In an era where technology devices have become essential for daily life, users in Pakistan often face difficulties finding reliable repair and accessory shops. The absence of a centralized platform, unreliable online listings, and limited digital visibility of small vendors make the search time consuming and frustrating. To address this gap, TechFinder AI introduces an AI-powered web application that helps users discover trusted tech service providers through natural-language interaction and location-aware recommendations. The system integrates an NLP-based Chabot, a GPS-enabled search engine, and interactive maps that display verified repair and accessory shops across Pakistan. By combining artificial intelligence with real-time geotagging and a dynamic database, the platform enhances user trust, accessibility, and convenience. Ultimately, TechFinder AI aims to bridge the digital gap between customers and local tech businesses building a smarter, more connected ecosystem.

2193. ECHO STRIKE: A MODULAR MULTIPLAYER FPS EXPERIENCE

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

Echo Strike is a modular multiplayer first-person shooting (FPS) game developed on the Unity platform for Android devices. It connects players online through a secure server. The game features two opposing teams—terrorists and soldiers—engaged in strategic combat within a 3D environment.

2194. BIOMETRIC BASED LAND OWNERSHIP VERIFICATION USING BLOCKCHAIN AND ARTIFICIAL INTELLIGENCE

Project Advisor	MR. USAMA NASIR
Status	In Process of Completion

This project addresses the critical issue of land fraud and ownership disputes, which remain widespread due to outdated, paper-based systems and centralized digital solutions that are vulnerable to tampering. Our proposed system integrates blockchain, biometric authentication, and artificial intelligence into a unified platform for secure and transparent land ownership verification. A cross-platform application will allow users to register, verify, and transfer land ownership using biometric authentication such as fingerprint or facial recognition. Documents will be stored on IPFS with their hashes on blockchain, ensuring immutability. AI models will be employed for document forgery detection and dispute risk prediction, enabling proactive fraud prevention. The project will use knowledge from software engineering, AI, databases, and blockchain technologies. The expected outcome is a tamper-proof, intelligent, and citizen-friendly prototype that enhances transparency and builds trust in land management systems.

2195. LEARNIVERSE

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

This project aims to design and implement a community-driven question-and-answer platform that addresses these gaps by fostering an inclusive, user-friendly environment tailored for computer science students and professionals. Expected Results: AI-Powered Features: Answer Suggestions & Smart Moderation: AI will suggest relevant answers and automatically filter out spam or low-quality content. Personalized Recommendations: AI will recommend questions and learning materials based on user activity. AI Chatbot: A chatbot will provide instant support and guidance for users. Smart Categorization: AI will categorize questions for easy navigation. User-Friendly Platform: The platform will be intuitive, with fast and accurate search functionality powered by Elasticsearch. Community Engagement: Gamification features (reputation points, badges) will encourage active participation and peer support. Real-Time Notifications: Users will receive instant updates on their questions and answers. Improved Learning Outcomes: The platform will enhance collaboration, problem-solving, and knowledge sharing, leading to higher user engagement and retention.

2196. SAHARA AI: DRUG ABSUE DETECTION AND SUPPORT APP

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

SAHARA AI: Drug Abuse Detection & Support App tackles Pakistan's rising drug abuse crisis through an AI-powered mobile platform offering private, culturally sensitive early detection and intervention. Integrating machine learning, behavioral analytics, and NLP, the system provides risk classification, relapse prediction, emotion recognition, and personalized support via a multilingual chatbot. Features include gamified recovery tracking, anonymous counselor connectivity, and NGO dashboards for data-driven interventions, ultimately reducing stigma and empowering at-risk youth to seek help.

2197. AURAROM

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

Weak eyesight, particularly difficulty seeing distant or small on-screen elements, is a widespread issue that current solutions fail to fully address. Existing accessibility tools often disrupt app layouts without truly enhancing visual clarity. This project proposes AuraROM, a custom Android-based OS with a built-in Clarity Engine that fundamentally redefines how content is displayed.

2198. FORMULA-1 APREXPRED

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

This project aims to develop a machine learning-based system that analyses historical Formula 1 racing data to provide optimized race strategies. By leveraging past race metrics such as lap times, pit stop durations, tire selections, weather conditions, and track

characteristics, the model predicts the most effective strategic decisions to maximize race performance. The system will assist teams in identifying critical factors that influence race outcomes and recommend data-driven strategies for pit stops, tire changes, and pace management. By incorporating advanced data analysis and predictive modelling techniques, this project aspires to bring an analytical edge to the fast-paced and competitive world of F1 racing, ultimately helping teams make smarter, real-time decisions on the track.

2199. OFU (OPPORTUNITIES FOR UCIPIANS): A UNIFIED DIGITAL PLATFORM FOR UCP STUDENTS TO ACCESS OPPORTUNITIES RANGING FROM JOBS TO INTERNATIONAL SCHOLARSHIPS AND INTERNSHIPS

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

This project proposes the development of OFU (Opportunities for Ucpians), a digital platform accessible via web and mobile applications. The system will centralize academic and professional opportunities for UCP students, including jobs, internships, scholarships, freelance projects, and university events. Unlike scattered communication channels (WhatsApp, emails, notice boards), OFU provides a single reliable hub enhanced by AI tools such as a resume analyzer and guidance chatbot. The platform will also feature an alumni networking module for career mentorship. The final outcome will be an AI-enabled, student-focused system that improves access to opportunities, supports professional development, and strengthens student-alumni engagement.

2200. DOCUMENTOR

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

DocuMentor is an AI-powered web-based platform built to tackle the increasing challenges of enterprise document management. Unlike traditional tools such as Google Docs or SharePoint, it combines role-based access, workflow automation, and AI intelligence into a single integrated system. Developed with Laravel 11, Angular 18, MySQL, and LLMs, the system provides semantic search, content summarization, report generation, and secure e-signatures across multiple formats. The platform further supports version control, audit trails, task assignments, reminders, and analytics dashboards for compliance and productivity tracking. By integrating traditional document handling with modern AI-driven features, DocuMentor acts not just as a repository, but as an intelligent assistant that helps organizations work smarter, collaborate efficiently, and maintain security at scale.

2201. E WAKEEL: AI-POWERED LEGAL CONSULTATION AND CASE REPORT GENERATION

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

The legal system in Pakistan is often complex, time-consuming, and inaccessible to the general public, particularly for those who cannot afford professional legal assistance. Many individuals face challenges in understanding legal rights, drafting applications, and pursuing consumer protection cases. This project, E Wakeel: AI Legal Assistant, addresses this gap by developing an intelligent web-based platform that provides automated legal consultation and case report generation. The system integrates Artificial Intelligence (AI), Natural Language Processing (NLP), and Machine Learning to analyze user inputs, identify the relevant legal domain (criminal, civil, or consumer), and generate accurate legal documents such as complaints, petitions, and reports. The platform consists of multiple modules, including User, Lawyer, Admin, and Consumer modules, each designed to streamline interactions and ensure easy access to legal resources. The significance of this project lies in its potential to enhance access to justice, reduce dependency on costly legal services, and empower citizens to address legal and consumer-related issues effectively. By combining AI-driven legal consultation with automated report generation, the system offers a reliable, efficient, and scalable solution for bridging the gap between citizens and the legal framework. The expected outcomes include an intelligent platform that improves legal literacy, simplifies case filing, supports consumer rights, and strengthens the legal ecosystem through automation and accessibility.

2202. AGRICHECK: A WEB-BASED SOIL FERTILITY ANALYZER FOR SUSTAINABLE FARMING PRACTICES

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

AgriCheck is an AI-powered soil fertility analyzer designed to help farmers test their soil instantly using IoT sensors for NPK, pH, and moisture. The system analyzes data via AI models and provides real-time, bilingual fertilizer recommendations through a web dashboard, SMS, and chatbot for smarter, sustainable farming.

2203. TOUREASE: SMART TRAVEL PLANNING AND MONITORING SYSTEM

Project Advisor	MS. ANEELA MEHMOOD
Status	In Process of Completion

TourEase is an AI-based web and mobile application designed to help travelers plan, manage, and monitor their trips efficiently. The system leverages Artificial Intelligence to generate optimized itineraries based on user preferences such as budget, duration, and interests. It provides smart recommendations for tourist attractions, hotels, and restaurants while also forecasting weather and budget usage. Additionally, the system allows users to upload images of places. Using AI-powered image recognition, it can identify landmarks and provide details, maps, and nearby spots. A dedicated Guardian Dashboard enables family members to track the traveler's real-time location, budget, and weather conditions and communicate through an integrated chat. By the end of development, TourEase will include both a website and a mobile app. The website will host Guardians side. The mobile app will host information about hotels, transportation, and other travel facilities to assist users in planning trips.

2204. AI-BASED VOICE CONTROLLED SHOPPING ASSISTANT FOR VISUALLY IMPAIRED

Project Advisor	MS. AROOJ ZAHRA
Status	In Process of Completion

Visually impaired people are unable to shop online as system is completely designed for sighted users. Existing accessibility feature like screen reader is also unable to solve the barriers like browsing, comparing and purchasing product. This project proposes the development of an AI assistant that will allow the visually impaired user to search, compare, review and place the order entirely with the help of voice command. This system will use Speech-to-Text and Text-to-Speech technologies to enable human and assistant interaction while product information will be extracted from websites with the help of web scraping and browser automation. A secure ordering process is implemented through automated checkout with user credentials and voice-based confirmation to protect user's privacy. Knowledge areas applied includes Natural language processing, web automation and mobile-app development. This project aims to develop a functional mobile application enabling visually impaired to shop online independently. The expected result is an inclusive platform that demonstrates how AI and automation can reduce digital barriers and promote equal access to e-commerce.

2205. ADAPTIVE LEARNING SYSTEM FOR KIDS

Project Advisor	MS. ARSHIA NAEEM
Status	In Process of Completion

The Adaptive Learning System for Kids is a next generation educational platform that personalizes both academic learning and emotional development for children aged 4–12. Unlike traditional systems that deliver the same content to all learners, this platform adapts lessons dynamically using AI driven algorithms that analyze performance, pace, and progress. At the same time, it incorporates emotional intelligence activities that encourage self-awareness, empathy, and self regulation skills often overlooked in conventional learning tools. To make learning enjoyable, the system integrates gamification features such as badges, certificates, and rewards that sustain motivation. Role based access for children, parents, and administrators ensures transparency and continuous monitoring of progress. Special attention has also been given to usability: the interface is designed with light colors, balanced contrasts, and consistent visual schemas that are gentle on the eyes and reduce mental fatigue, creating a safe and engaging experience for young learners. By merging adaptive content delivery, emotional intelligence development, and health conscious design, this project aims to improve academic outcomes, nurture social emotional skills, and enhance long term engagement in children's learning journeys. It leverages core areas of computer science software engineering, artificial intelligence, and database management to deliver a scalable, research driven solution for modern education.

2206. FITVERSE: AI-POWERED FITNESS, NUTRITION & SOCIAL WELLNESS PLATFORM

Project Advisor	MS. AYESHA ZAHEER
Status	In Process of Completion

Fitverse is an AI-powered fitness, nutrition, and wellness mobile application designed to provide an integrated solution for physical, nutritional, and mental well-being. It combines personalized workout recommendations, AI-driven meal tracking and planning, social fitness networking, gamification, and emergency SOS features into a unified platform. By addressing the fragmented nature of current fitness apps, Fitverse delivers a holistic, adaptive, and engaging user experience aimed at promoting long-term health, better eating habits, and safety through the inclusion of SOS emergency support.

2207. GREEN EYE: AI FOR SMARTER RECYCLING

Project Advisor	MS. BEENISH ZAFAR
Status	In Process of Completion

Green Eye: AI for Smarter Recycling is a mobile-based AI-powered system designed to make recycling easy, accessible, and educational for users. The application leverages deep learning (CNN models) for material recognition using a smartphone camera, provides step-by-step recycling guidance, suggests upcycling ideas, and connects users with nearby recycling centers. A GPT-based chatbot will offer instant answers to user queries, while a community contribution feature will allow users to add new recycling data. This solution promotes sustainability, improves waste sorting efficiency, and encourages eco-friendly habits.

2208. VEHICLE VITALS

Project Advisor	MS. BEENISH ZAFAR
Status	In Process of Completion

In Pakistan and many other countries, personal vehicles are essential for daily commuting and transport. However, most owners do not follow proper maintenance schedules, often due to forgetfulness or lack of knowledge. Essential tasks such as oil changes, air filter replacements, tire checks, brake inspections, and tuning are frequently delayed or skipped, resulting in poor vehicle performance, increased fuel consumption, unexpected breakdowns, and higher repair costs. Current solutions like notebooks, spreadsheets, or third-party apps such as Fuelio offer fuel or expense logging but lack intelligence, reminders, and local relevance. Most are either too complex for everyday users or targeted at fleets, leaving a clear gap for a simple, localized, and intelligent mobile app for individual car and bike owners. To address these gaps, Vehicle Vitals will provide innovative features alongside basic logs and reminders, including Fuel Cost Prediction to estimate monthly expenses, a Vehicle Health Score for quick condition insights, an Odometer Scanner(for digital meters) to reduce manual data entry, and an AI-powered Chatbot Q&A for common maintenance queries. Additionally, anomaly detection and visual dashboards will support timely decision-making and efficient vehicle care. The project will leverage mobile application development (Flutter), backend management (Laravel + MySQL), AI-based anomaly detection, chatbot integration (Dialogflow), and data visualization(Graphs etc) to implement the system. The expected outcomes include organized maintenance tracking, improved fuel efficiency, timely service reminders, and enhanced user convenience, empowering vehicle owners to manage their cars and bikes effectively without technical expertise.

2209. SMARTGRADE USING AI

Project Advisor	MS. BEENISH ZAFAR
Status	In Process of Completion

Manual grading is often slow, inconsistent, and affected by human bias and human errors, especially for descriptive answers and large-scale assessments. To solve this, we propose SmartGrade, an automated system that evaluates multiple question types including descriptive, objective, and numerical problems. The system works with relevant reference data provided by educators such as model answers, answer keys, and solution steps, which serve as the benchmark for grading. Using NLP models (BERT), SmartGrade measures not only the correctness but also the relevance of student responses to the given question and reference answer. OCR technology further enables the evaluation of handwritten as well as digital answer sheets. Objective questions are matched against predefined correct options, while numerical problems are validated against final solutions with optional stepwise checking. By combining semantic similarity, OCR, and rule-based evaluation, SmartGrade ensures faster, fairer, and more reliable grading, while still allowing teacher review where needed. Expected outcomes include reduced workload for educators, consistent scoring, and timely, transparent feedback for students.

2210. VISION LANGUAGE PATENT INTENT SYSTEM

Project Advisor	MS. BEENISH ZAFAR
Status	In Process of Completion

Patient Intent Recognition System (MedPerceptAI) aims to enable healthcare robots and smart monitoring systems to interpret what a patient is trying to do not just detect their presence. Traditional hospital surveillance or fall-detection models only recognize motion events, without understanding the underlying intent behind them. This project introduces a vision–language–based AI system capable of reasoning about patient behavior in context, such as attempting to stand up, reaching for medical equipment, or showing signs of distress. The proposed framework integrates object detection (YOLOv8) and pose estimation (MediaPipe/OpenPose) with a fine-tuned vision–language reasoning model (SmolVLM/BLIP-2) trained on curated hospital-like datasets and reasoning benchmarks such as SpatialSense and VGBench. The system outputs context-aware interpretations in real time, enabling proactive alerts or robotic assistance to prevent unsafe patient actions. This multidisciplinary project combines computer vision, natural language processing, deep learning, and healthcare informatics to create an intelligent, privacy-preserving monitoring solution. The expected outcome is a validated prototype capable of accurately recognizing patient intent, reducing fall-related incidents, and enhancing the safety and autonomy of healthcare robotics environments.

2211. MASHHOOR: CONNECTING BRANDS WITH THE MOST MASHHOOR VOICE ONLINE POWERED BY AI

Project Advisor	MS. FAIZA KHADIM
Status	In Process of Completion

Influencer marketing has become one of the most effective strategies for brand growth, yet small businesses and startups in Pakistan and Asia face significant challenges in identifying credible influencers, filtering fake engagements, and managing outreach. Existing global platforms such as Upfluence and Aspire.io are costly and not localized for regional markets, while local academic attempts remain limited in scope and lack automation. This project, Mashhoor, proposes an AI-powered influencer marketing platform tailored for startups and SMEs in Pakistan and Asia. The platform will enable businesses to discover influencers through advanced filters (niche, follower count,

engagement rate, trust score, ROI predictor), automate outreach via an AI chat-bot, and provide verified contact methods. Machine Learning models will be applied to calculate a Trust Score for detecting fake followers and to build an ROI Predictor that estimates campaign performance. In addition, sentiment analysis will classify influencer responses to streamline communication. The expected outcome is a scalable and startup-friendly platform that combines automation, fraud detection, and data-driven insights, providing both academic research contributions and practical entrepreneurial value.

2212. CIPHERNEST AI: A SECURE, INTELLIGENT SYSTEM FOR HIDING AND RETRIEVING ENCRYPTED DATA IN TEXT AND IMAGES

Project Advisor	MS. FAREEHA IQBAL
Status	In Process of Completion

CipherNest AI is a secure desktop application that merges cryptography, steganography, and artificial intelligence for covert data protection. It hides encrypted data within images and text files using AES encryption, RSA hybrid key exchange, and AI-based semantic search, providing an all-in-one privacy solution.

2213. TAJWEED BY AI: INTELLIGENT VOICE-BASED QURAN LEARNING ASSISTANT

Project Advisor	MS. MAHAM ARMAGHAN
Status	In Process of Completion

Learning the Holy Quran with correct Tajweed is essential for preserving the accuracy and beauty of recitation. However, many learners face challenges such as limited access to qualified teachers, lack of personalized guidance, and difficulty in identifying their own mistakes during practice. To address this gap, this project proposes the development of “Tajweed by AI: Intelligent Voice-Based Quran Learning Assistant”, an AI-driven system that leverages speech recognition, natural language processing, and machine learning to provide real-time feedback on Quran recitation. The system will analyze the learner’s voice, detect pronunciation and Tajweed errors (such as misapplication of ghunna, qalqala, madd, and idgham), and offer corrective guidance through both audio and visual feedback. Knowledge areas from speech processing, deep learning, and phonetic analysis will be utilized to design the error detection engine, while web technologies will be used for deployment to ensure accessibility. The expected outcome is an intelligent assistant that helps learners practice independently, improves accuracy in Tajweed application, and makes Quran education more widely accessible. Beyond individual learners, the system can also support teachers by providing a supplementary tool for monitoring student progress. Ultimately, this project combines religious education and cutting-edge AI technologies to create a socially impactful solution that promotes accurate and beautiful Quran recitation worldwide.

2214. FAMILY DIGITAL HERITAGE VAULT

Project Advisor	MS. MAHRUKH BATOOL
Status	In Process of Completion

In today’s digital age, family memories and traditions are often fragmented across devices, social media, or cloud platforms, making them vulnerable to loss and

inaccessibility over time. This creates a critical challenge in preserving emotional, cultural, and historical heritage for future generations. The proposed project, Family Digital Heritage Vault, aims to solve this problem by developing a secure, cloud-based platform where families can store and manage multimedia content such as photos, videos, audio messages, and written advice. The system will feature an interactive family tree, biometric and heir-based access control, and inheritance settings to ensure that sensitive information is shared only with designated family members. Additionally, the application will allow the creation of personalized event cards, blending modern technology with family traditions. This project draws upon knowledge areas from cloud computing, cybersecurity, database systems, software engineering, and mobile application development. The expected outcome is a cross-platform application (web and mobile) with a user-friendly interface, robust security, and reliable storage, enabling families to preserve their legacies across generations. By addressing both technical and emotional needs, this solution contributes to cultural preservation and intergenerational bonding through technology.

2215. SAFEHER AI: PROACTIVE SAFETY ECOSYSTEM FOR WOMEN

Project Advisor	MS. MAHRUKH BATTOOL
Status	In Process of Completion

Women's safety has become one of the most critical issues in today's society, especially in Pakistan, where many students and working women face harassment and unsafe travel situations on a daily basis. Most existing safety apps only respond after an incident has already occurred which means they are reactive rather than preventive. Our project, SafeHer AI, aims to change that. It is a proactive and intelligent safety application that uses Artificial Intelligence (AI) to predict unsafe routes and prevent possible threats before they happen. The system analyzes multiple factors such as crime reports, time of day, location data, and community feedback to calculate a Route Safety Score, helping users make safer travel decisions. In an emergency, the app allows users to activate an SOS alert through voice command (for example, saying "Help Me!"). The alert instantly shares the user's live location and audio evidence with her guardians and the nearest police control room. This direct connection with the police department ensures immediate action and quick response. SafeHer AI also introduces a Campus Safety Mode for universities, where students can report incidents, receive real-time alerts from campus security, and access verified transport and nearby police contact information. This feature will help educational institutions improve their internal safety systems and ensure a safer environment for female students. Other features include a Fake Call and Siren option, a Guardian Circle for trusted contacts, Community-Based Danger Heatmaps, Anomaly Detection for unusual travel behavior, and Discreet Audio/Video Recording for evidence collection. With SafeHer AI, we aim to build more than just a mobile app our goal is to create a reliable and intelligent safety ecosystem that empowers women to travel freely and confidently. "SafeHer AI represents our commitment to use technology for real social impact creating a safer, smarter, and stronger community for women everywhere."

2216. ZENNO: AI COMPANION FOR DEVELOPER CONTEXT AWARENESS, REAL-TIME PROFILING AND SMART COLLABORATION

Project Advisor	MS. MAHWISH SHAHID
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Status	In Process of Completion
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Zenno is an intelligent AI-augmented companion for developers, designed to build a contextual relationship between users and their devices while enabling live skill-based connections and smart hiring. The system passively collects local behavioural data (editor activity, typing bursts, coding environments) through a lightweight agent, and applies local ML processing using clustering and classification to infer real-time states (focused, distracted, idle). These insights are shared with a fine-tuned NLP model to deliver personalized nudges (motivational, coaching, peer support). Zenno further constructs dynamic, live skill profiles reflecting real tools and frameworks in use, enabling developers to connect with peers and allowing recruiters to search talent based on real-world capabilities rather than static resumes. The project aims to improve focus, foster developer communities, ensure transparent skill visibility, and redefine hiring with privacy-respecting, behaviour-backed analytics.

2217. ECHOSIGN

Project Advisor	MS. MAHWISH SHAHID
Status	In Process of Completion

Communication barriers between the deaf/mute community and the general population remain a major challenge, particularly in digital and remote interactions such as phone calls, video conferencing, and messaging. Traditional solutions, such as human interpreters or sensor-based gloves, are either expensive, inconvenient, or impractical in everyday scenarios. To address this issue, our project introduces EchoSign, a real-time, camera-based sign language translation system that leverages computer vision and deep learning to recognize hand gestures and convert them into both text and speech. EchoSign uses a smartphone or computer camera as input, eliminating the need for specialized hardware and making the solution more accessible, cost-effective, and scalable. The system employs Convolutional Neural Networks (CNNs) and Transformer-based models to detect and classify gestures from live video streams. Recognized signs are then translated into spoken words through Text-to-Speech (TTS) and displayed as on-screen text, enabling seamless communication between deaf/non-verbal individuals and hearing users. To ensure bi-directional communication, EchoSign also incorporates Speech-to-Text (STT) technology to convert the hearing person's voice into real-time captions. Initially, the system will focus on American Sign Language (ASL), with potential extension to Pakistani Sign Language (PSL/ISL) for local adoption. Key challenges such as variations in lighting, backgrounds, and hand shapes will be addressed through robust preprocessing, dataset augmentation, and model optimization techniques. The end product will be a mobile application that integrates AI-powered sign recognition with real-time communication tools, offering an inclusive and practical solution for millions of deaf and mute individuals in Pakistan and worldwide. By combining artificial intelligence, computer vision, and mobile development, EchoSign aims to bridge the communication gap and contribute to a more inclusive and accessible society.

2218. ASSAN KHETI: SMART AGRICULTURE ASSISTANT FOR FARMERS

Project Advisor	MS. MARIA NAZIR
Status	In Process of Completion

Agriculture is the backbone of Pakistan's economy, yet farmers struggle with Crop diseases, unpredictable weather, unstable market prices, and limited financial tools. To address these challenges, we propose Assan Kheti, a mobile application that combines AI, mobile technologies, and cloud services into a digital farming assistant. The app features AI-powered crop disease detection, crop and market recommendations, a bilingual voice assistant (Urdu/English), budget planning, real-time mandi price updates, and a secure B2C marketplace with escrow payments. It also supports offline use with cloud sync and delivers timely irrigation and weather alerts. By applying artificial intelligence, mobile and backend development, cloud databases, voice processing, and secure payments, Assan Kheti is expected to improve crop yields, optimize resources, increase farmer income through direct trade, and enhance accessibility for illiterate farmers. Ultimately, the system aims to provide a reliable and scalable solution for sustainable farming in Pakistan.

2219. EMOTION AWARE CBT THERAPY ASSISTANT

Project Advisor	MS. MARIA NAZIR
Status	In Process of Completion

Mental health conditions like stress, anxiety and depression are increasingly becoming common particularly among students and youth. Professional help is inaccessible because it is expensive, stigmatized, and therapist shortage. The Emotion-Aware CBT Therapy Assistant is a mobile app that assists individuals by recognizing emotions via text, voice, and facial expressions. It offers customized CBT practices, journaling with a game, mood, and relaxation built-in music player. The app is not only waiting that the user requests assistance, it may begin calming activities automatically and alert trusted contacts or authorities in the event of crisis. Voice-based analysis will be improved through the use of noise cancellation. The project is a combination of AI, NLP, machine learning, mobile application creation, and software engineering. A projected outcome is the creation of a bilingual user-friendly application that will offer affordable emotional support, promote self-care, and offer help when it is needed.

2220. AI-POWERED CAMPUS PARKING SYSTEM FOR REAL-TIME CONTROL AND PREDICTIVE MANAGEMENT(AUTOGATE)

Project Advisor	MS. MARIA NAZIR
Status	In Process of Completion

The increasing vehicle density within university campuses and public facilities has made parking management a critical challenge. Traditional systems suffer from inefficiencies such as manual logging, inaccurate records, and lack of predictive insights. This project presents an AI-Driven Smart Parking System that utilizes state-of-the-art technologies to streamline parking operations through automation, real-time tracking, intelligent interaction, and forecasting. Vehicles at entry/exit points are detected in real time using cameras. Barrier control is integrated: the desktop application will automatically open/close entrance barriers when an authorized vehicle is recognized. All logs are updated instantly in the database.

2221. V-TAILOR

Project Advisor	MS. MARIA NAZIR
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Status	In Process of Completion
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The tailoring industry faces issues like inconsistent quality, poor communication, and limited digital access for home-based women tailors. This creates a need for a smart and reliable system that connects customers and tailors on one platform. V-Tailor aims to solve this by developing an AI-powered mobile app with 3D outfit customization, fashion recommendations, real-time chat, and secure in-app payments through dual dashboards for users and tailors. The project combines key technologies from Artificial Intelligence, Computer Graphics, Software Engineering (FastAPI), Database Systems (MongoDB), and Networking (WebSockets) to build a complete solution. The expected outcome is a user-friendly platform that improves trust, accuracy, and accessibility while empowering home-based women tailors with digital visibility and financial independence.

2222. AR WARDROBE: VIRTUAL TRY-ON SYSTEM FOR FASHION RETAIL

Project Advisor	MS. MARIA NAZIR
Status	In Process of Completion

The retail fashion industry faces challenges such as long queues in trial rooms, hygiene concerns, limited retail space, and low engagement during shopping experiences. The proposed project, AR Wardrobe, introduces a Virtual Try-On system using Augmented Reality (AR) technology to address these issues. The system employs pose detection (MediaPipe/ARKit) and 3D garment overlay (Unity3D + cloth physics) to enable real-time, full-body virtual trials. Unlike existing solutions such as Zara AR (static models), Snapchat filters (face-only), or Nike Fit (single-brand, footwear only), our solution integrates multi-brand support, real-time garment simulation, and in-store collaboration through smart AR mirrors. The project further incorporates security measures such as encrypted user data storage, secure Firebase authentication, and anonymization of try-on history. The return on investment (ROI) is clear: reduced retail space cost, higher customer engagement, and increased sales conversion rates. The scope extends beyond in-store use, with potential for integration with e-commerce platforms, AI outfit recommendations, and analytics for retailers.

2223. SKYDROP

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

This project proposes "SkyDrop," a cost-effective, modular drone delivery system designed for remote and extreme environments like high-altitude regions and disaster zones. The problem addressed is the prohibitive cost, limited battery life in cold weather, and lack of integrated safety and security features in commercial drones, which hinder their use in critical, low-resource areas. SkyDrop aims to overcome these limitations by leveraging open-source hardware (ArduPilot/Betaflight), low-cost sensors, and microcontrollers (Arduino, ESP32). Key innovations include a Peltier-based cooling chamber for medical supplies, heated battery compartments, RFID-secured drop-off, and lightweight AES-128 encryption for communication. The expected results are a functional prototype capable of 1km flights in cold weather, a validated temperature-controlled payload module, a secure communication protocol, and a working smart locker interface. This project will contribute a scalable, open-hardware solution that democratizes access to drone logistics for humanitarian aid.

2224. VARID.AI: AI-BASED PSYCHOLOGICAL INTERVIEW SYSTEM FOR STRESS DETECTION

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

Varidai is an AI system that interacts with employees via an adaptive interview, detecting stress through facial expressions, voice, and text analysis using pre-trained models. It dynamically adjusts questions for empathetic engagement and generates real-time stress scores and reports. The project combines AI, psychology, NLP, and user interface design to build a prototype.

2225. STYLE-E-FIT: AI-POWERED PERSONAL STYLING ASSISTANT

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

It is also hard to choose good hairstyles and makeup appearance since individuals can hardly imagine how the style will look on their face. This project solves this issue by creating an artificial intelligence-based styling assistant that will analyze facial features and offer each user a realistic preview of a hair style and makeup. The system identifies some of the central abilities like face-shape recognition, hair segmentation, and personalized recommendations but can be done under the academic limits. The project will utilize such knowledge areas as machine learning, computer vision, image processing, mobile application development, and user-interface design to incorporate all these elements into the project. It is hoped that it results in a lightweight, privacy-friendly mobile prototype that can provide a feel-natural virtual styling and event-based recommendations and can be used as an effective example of how to unite fashion technology and artificial intelligence in settings with limited resources.

2226. HERCYCLEPREDICT

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

Women in remote and underserved regions face barriers in reproductive health monitoring due to limited internet connectivity, privacy concerns, and lack of digital access. Existing apps rely on centralized servers and constant internet, making them unsuitable for rural populations. Prior studies also emphasize that reproductive health AI models must adapt to local constraints, since most existing systems require stable infrastructure and centralized data processing. HerCyclePredict provides an offline-first, privacy-preserving cycle prediction system using Federated Learning (FL) with LSTM/GRU models. The app runs predictions without the internet and only syncs small, encrypted model updates when connectivity is available. Recent research shows FL in healthcare ensures high accuracy while preserving privacy, with reported accuracies above 92%. Special support is added for non-smartphone users via USSD and IVR codes, and for women without personal devices through Community Health Worker (CHW) hubs. All data remains encrypted and private, even in shared-device contexts. This project ensures personalized, secure, and accessible reproductive health predictions for women in remote areas, directly supporting UN SDGs 3 (Good Health) and 5 (Gender Equality).

2227. SMART EYE TESTING AND WELLNESS GUIDANCE

Project Advisor	MS. MISBAH NAZ
Status	In Process of Completion

This project proposes Visuar, an AI-based eye screening system that enables users to conduct vision tests using a standard webcam and microphone. It addresses the growing problem of inaccessible, unaffordable, and overlooked eye care—especially in regions where routine checkups are limited or delayed. Conditions such as myopia, digital eye strain, and color vision deficiency often go undetected until they impact daily life. Visuar holds significance as a low-cost, at-home alternative to traditional eye exams, reducing the dependency on clinics, specialists, and physical tools. By integrating computer vision, machine learning, and human-computer interaction, the system conducts visual assessments like contrast sensitivity, motion tracking, and gaze detection—providing real-time feedback to users.

2228. NEXCALL: NEXT GENERATION CALL SUPPORT

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

This project presents an AI Voice Agent platform that enables businesses to automate customer service through intelligent, human-like phone interactions. By integrating LLM model and API's the system handles calls, understands queries, responds naturally, and logs detailed transcripts — reducing call center costs and ensuring 24/7 support.

2229. INTELLIGENT SECURE MEDITATION COUNSELOR-PATIENT CARE SYSTEM WITH AI VIRTUAL ASSISTANT

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

This project develops BENZI.AI a secure web platform to manage and improve therapist–patient workflows, combining appointment management, encrypted medical record storage, anonymous session modes, and a context-aware AI virtual assistant that personalizes recommendations to individual patients. The system provides distinct portals for therapists, patients, and administrators; integrates secure video for sessions; supports payments and scheduling; and uses strong cryptographic controls to protect all patient data at rest and in transit. Key innovations include automatic real-time scheduling with unavailability blocking, anonymous interaction mode, comprehensive progress tracking (visual analytics + points system), and an AI assistant that uses only authorized patient context (all under strict privacy controls). This summary and project content are drawn directly from the project brief you provided.

2230. DR GOODMEAL: SMART FOOD HYGIENE & NUTRITION TRACKER APP

Project Advisor	MS. MISHA ASIF
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Status	In Process of Completion
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Consumers face challenges in finding safe and healthy dining options due to lack of accessible hygiene inspection data and incomplete nutrition information from restaurants. Dr GoodMeal is a web-based application designed to empower users with verified hygiene ratings, detailed nutritional information, and personalized food recommendations based on allergies, dietary goals, and health conditions. The app integrates official data, community feedback, and AI-powered analysis to help users make informed dining choices, improve public health awareness, and incentivize restaurants to maintain higher hygiene standards.

2231. SMART TALENTSPHERE AI: ATS-POWERED HRMS FOR WORKFORCE INTELLIGENCE

Project Advisor	MS. MISHA ASIF
Status	In Process of Completion

Provide greater ease of integrating data from multiple HR functions. Web-enabled access from laptops, smartphones, and tablets. The HR portal also helps HR better brand itself to employees. As most organizations already have automated basic HR admin, simple automation no longer assures a competitive advantage. Instead, organizations must determine how to use technology to transform their HR practices and market their HR brand. The system is customizable and scalable to fit the organization's needs, with modular features and workflows, regular updates, backups, user training, and strong security measures.

2232. KAPRAKAR: THE TAILOR IN YOUR POCKET

Project Advisor	MS. RABIA ARSHAD
Status	In Process of Completion

KapraKar is a mobile application that helps Pakistani women get custom stitching, alterations, and style guidance from home. Users can share body measurements (with step-by-step help), select nearby tailors, and track their orders. The app includes an AI-powered design assistant that analyzes fabric images to suggest suitable styles, and a 3D avatar preview that shows stitched dresses on mannequins of different body types. It supports Urdu and English, integrates small vendors, and aims to modernize tailoring with convenience, accuracy, and inclusivity.

2233. MEALMATRIX: WHERE FLAVOR MEETS WELLNESS

Project Advisor	MS. RABIA ARSHAD
Status	In Process of Completion

MealMatrix is a culturally relevant web-based nutrition assistant designed to support individuals managing Type-2 Diabetes in Pakistan. The system leverages AI-driven recommender systems to suggest personalized, diabetes-friendly desi recipes while addressing dietary restrictions and preferences. It integrates BMI calculation, calorie tracking, personalized meal planning, and multilingual (Urdu/English) voice interaction to maximize accessibility for seniors and non-technical users. Recognizing the sensitivity of health data, the project incorporates secure storage, encrypted communication, and

privacy-preserving mechanisms to safeguard personal information. By blending AI technology with localized dietary knowledge, MealMatrix aims to improve self-care, promote healthier food choices, and empower patients to manage diabetes effectively.

2234. FOODGUARD: AI-POWERED FOOD SCANNER

Project Advisor	MS. RABIA ARSHAD
Status	In Process of Completion

This project aims to develop an intelligent mobile application, FoodGuard, that uses computer vision and machine learning to detect the freshness and type of food items such as meat, fruits, and vegetables. The app will also display nutritional information, categorization, and real-time market prices obtained via web scraping. The system will utilize deep learning models (MobileNetV3 [2], EfficientNet [1], ResNet [3]) trained on public datasets to classify items as fresh, semi-fresh, or spoiled and identify the food type (fruit, vegetable, or specific meat). It will distinguish between chicken, fish, and red meat. The app will provide details such as vitamin content, calories, and price range for at least ten fruits and ten vegetables. Built with React Native, the app integrates TensorFlow Lite [10] for on-device AI inference, ensuring offline capability. It combines machine learning, web scraping, and user-centric mobile design to create a comprehensive food-quality analysis tool.

2235. AUTITRUST: BLOCKCHAIN FOR RELIABLE AUTISM CARE

Project Advisor	MS. RABIA ARSHAD
Status	In Process of Completion

AutiTrust is a mobile app that helps parents and doctors detect and manage Autism Spectrum Disorder (ASD) in children. The app uses Artificial Intelligence (AI) to study the child's behavior and find out the level of autism risk low, medium, or high. Based on this, it gives suggestions for useful therapies, home activities, and ways to help the child learn and communicate better. To keep all child health data safe, AutiTrust uses blockchain technology. This makes the records secure, tamper-proof, and only available to authorized people like doctors and parents. The app also allows users to track progress through charts, book doctor appointments, and chat safely. By combining AI and blockchain, AutiTrust provides a smart, private, and reliable way to support children with autism.

2236. CAREER GENIUS: FUELING THE QUEST FOR GROWTH

Project Advisor	MS. RABIA ARSHAD
Status	In Process of Completion

Career Genius is an AI-driven web platform designed to enhance job application preparation for students and professionals. It leverages Natural Language Processing (NLP) and machine learning to evaluate resumes for ATS (Applicant Tracking System) compatibility, ensuring alignment with job descriptions. The platform also generates personalized cover letters and provides an AI-powered interview preparation chatbot that assesses user responses for clarity, grammar, and relevance. Additionally, a salary and career growth predictor uses historical data to guide users in career planning and

negotiations. Built with Python, Django, React, and OpenAI APIs, Career Genius offers a complete, data-driven ecosystem that empowers job seekers to optimize their resumes, improve interview readiness, and make informed career decisions.

2237. DECENTRACODE

Project Advisor	MS. RAMSHA SAEED
Status	In Process of Completion

DecentraCode is an AI-powered decentralized programming contest platform that allows global users to host and participate in coding competitions using cryptocurrency as a medium of exchange. Unlike traditional centralized platforms, it ensures transparency, fairness, and security by using blockchain technology to handle contest governance and reward distribution. Artificial Intelligence plays a vital role by evaluating code not only for correctness but also for efficiency, readability, and maintainability. Participants benefit from real-time feedback through an analytics dashboard that highlights areas of improvement and provides AI-generated performance metrics. The project integrates multiple domains, including blockchain, machine learning, and web development. It introduces innovative reward mechanisms by issuing NFT-based certificates and crypto tokens as verifiable proofs of achievement. This ensures tamper-proof records and motivates participants through gamification. By decentralizing control, the platform empowers participants to create and govern contests without reliance on a central authority, fostering inclusivity and trust. DecentraCode aims to bridge the gap between modern technologies and education by creating a next-generation platform for competitive programming that is fair, intelligent, and transparent. This project contributes to research and practice in AI-driven assessment and blockchain-enabled systems.

2238. ASHES OF VALOR

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Role-playing games (RPGs) are highly immersive but often require extensive resources, making them challenging to develop in academic settings. This project addresses that problem by creating a fantasy RPG that demonstrates core genre features narrative-driven quests, character progression, exploration, and combat while remaining feasible within limited constraints. The project will apply knowledge areas including software engineering, object-oriented programming, artificial intelligence, data structures, and user experience design to integrate these systems effectively. The outcome will be a playable RPG prototype that balances technical implementation with creative storytelling, offering a scalable model for complex game development in resource-limited environments.

2239. SAFEHOOD: REAL-TIME COMMUNITY SAFETY APP WITH P2P ALERTS, LOCAL HELP FORUM AND EMERGENCY SOS

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

SafeHood is a dual-purpose mobile app designed to improve personal and community safety by fostering real-time local connections. It creates Safety Networks by linking users within a radius, enabling them to offer or request help for daily needs or

emergencies. In critical situations, the Emergency Response System sends instant alerts to nearby users, local security personnel, and emergency services. An integrated AI voice and text assistant offers real-time crisis guidance, such as first aid steps or emergency protocols. The app also includes a geofenced Community Forum, where users can post or respond to local assistance requests. Verified volunteer responders can step in for urgent needs, creating a reliable layer of community support. SafeHood combines technology and community to build safer, more connected neighborhoods.

2240. PROPMATE: AI AGENT TO AUTOMATE FREELANCE PROPOSALS

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

PropMate is an AI-powered tool that helps users respond quickly to work opportunities on Facebook. It scans posts in relevant groups and pages, understands the requirements using NLP, and generates personalized response drafts based on the user's skills and profile. Users can review and approve these drafts through a simple dashboard. This solution reduces the time spent manually searching and replying to posts, improves response quality, and increases the chances of getting work or collaborations on Facebook.

2241. VIRTUOMATE

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

VirtuoMate is an AI-powered mobile application that simulates an emotionally intelligent virtual mentor. It provides users with real-time conversational coaching, role-play simulations for interviews or presentations, and an AI-generated video CV feature. The app combines natural language processing (GPT-4/Gemini), text-to-speech, and avatar technology to deliver personalized, empathetic, and adaptive mentorship. The project aims to improve communication, confidence, and soft skills, especially for students and job seekers, while offering institutions and businesses a scalable platform for HR and training.

2242. DOOMS DRIVE: DUAL-PLAYER OFFLINE COMBAT GAME

Project Advisor	MS. SADIA ASLAM
Status	In Process of Completion

Dooms Drive is an offline multiplayer 3D combat racing game that introduces a unique cooperative control system where each vehicle is operated by two local players—one as a driver and the other as a gunner. The driver handles navigation, speed, and racing, while the gunner manages weapons and defensive mechanics. The game features diverse modes such as pure drag races, combat-enhanced races, and minefield challenges. To ensure strategic and competitive gameplay without internet dependency, Dooms Drive offers split-screen local multiplayer support, AI-controlled opponents, and an offline progression system for vehicle and weapon upgrades. Enhanced by immersive sound effects, dynamic health/damage systems, and a responsive UI, the project delivers an action-packed co-op experience, ideal for parties, family play, and couch multiplayer.

sessions. This game emphasizes player communication and coordination in a fast-paced, visually rich racing-combat environment, making it both technically challenging and highly engaging for users.

2243. LEADBOTX: NEXT-GEN LEADERSHIP BOT

Project Advisor	MS. SAMMRA HABIB
Status	In Process of Completion

LeadBotX is an AI-powered chatbot designed to simplify access to structured business and organizational data. Instead of requiring technical expertise in spreadsheets or databases, users can retrieve information through natural language commands—via text or voice. The system leverages NLP models, role-based access control (RBAC), and secure backend integration with Excel and SQL sources to ensure both usability and data protection. What makes LeadBotX unique is its focus on security, accessibility, and real-world adaptability. It supports authentication, encrypted communication, and audit logging, while tailoring responses based on user roles and permissions. By enabling features such as voice input, domain-specific NLP, smart alerts, and role-based data sharing, LeadBotX serves as more than just a query tool—it becomes a decision-making assistant. With applications in diverse fields such as business, restaurants, and law enforcement, LeadBotX eliminates technical hurdles, reduces errors, and provides fast, secure insights. Ultimately, it demonstrates the potential of Agentic AI in creating practical, scalable solutions for everyday data access and management.

2244. BLOCK-CHAIN BASED INVOICING SYSTEM

Project Advisor	MS. SAMMRA HABIB
Status	In Process of Completion

Small and medium enterprises (SMEs) often suffer from late payments, invoice tampering and a lack of reliable pre-payment risk assessment. This project proposes a secure, auditable invoicing platform that combines blockchain immutability (storing invoice hashes on-chain and maintaining full invoice data off-chain) with an AI-driven risk calculator that assigns a risk score to each invoice. Smart contracts will automate invoice lifecycle events (issue, verify, dispute resolution triggers, and conditional release of funds), while the off-chain database stores full invoice documents and metadata. The backend (Node.js) will orchestrate blockchain interactions, database operations, and AI model inference. Frontend dashboards (React) will present clean invoice creation flows, risk indicators and administrator controls. The system will be containerized (Docker) and orchestrated with Kubernetes for scalability. Expected outcomes: tamper-evident invoices, faster dispute resolution, proactive identification of risky invoices, and an easy-to-use platform that improves SMEs' cash-flow visibility and reduces fraud exposure.

2245. SMART AI-BASED PHOTO ORGANIZER AND AUTO EDITING WEB PLATFORM

Project Advisor	MS. SEHAR ALI
Status	In Process of Completion

Smart AI-Based Photo Organizer and Auto-Editing Web Platform is an intelligent web application that automatically enhances and organizes photos uploaded from mobile devices or professional cameras. Using custom AI models built with OpenCV.js and

TensorFlow.js, it adjusts brightness and contrast, detects blur and low-quality images, and groups photos by faces or scenes. Blurred or irrelevant photos are flagged or moved to a Trash section for review. The platform also offers manual tools like cropping, resizing, and background removal or replacement. Built on the MERN stack, it provides a unified, browser-based solution that saves time, protects privacy, and eliminates the need for multiple third-party editing tools.

2246. PATH OF HONOR: ETHICS DRIVEN TACTICAL RTS WARGAME

Project Advisor	MS. SIDRA KHALID
Status	In Process of Completion

Path of Honor is a futuristic real-time strategy (RTS) game designed to integrate ethical decision-making into competitive gameplay. Unlike traditional RTS titles that focus solely on domination, this project introduces the Honor Meter—a system that tracks player choices and links morality directly to performance. Protecting civilians, honoring truces, and accepting surrender grant advantages, while dishonorable actions reduce morale and weaken armies. Built using Unity for Android multiplayer, the game features fast-paced battles between advanced units and a four-level campaign that challenges players with scenarios involving betrayal, civilian safety, and moral dilemmas. By merging tactical combat with meaningful consequences, Path of Honor demonstrates how ethics can shape player behavior and enrich the RTS experience, offering both entertainment and academic insight.

2247. SMARTSCHEDULER: Ai-POWERED TIMETABLE GENERATION SYSTEM

Project Advisor	MS. SUNDAS ASGHAR
Status	In Process of Completion

SmartScheduler is an AI-powered timetable generation system that automatically creates optimized, clash-free schedules for students and faculty. It eliminates manual errors, balances workload distribution, and minimizes idle gaps through intelligent, constraint-based optimization. Unlike traditional tools such as Google Calendar or Coursicle, SmartScheduler arranges classes by considering availability, room limits, subject dependencies, and faculty preferences. It can, for example, ensure no classes are scheduled during predefined work hours or minimize walking distance between consecutive classes, providing a practical and personalized experience. With user-friendly web and mobile interfaces, users can easily view, update, or export timetables. Overall, SmartScheduler aims to deliver a dynamic, fair, and efficient scheduling solution that enhances productivity and simplifies academic coordination.

2248. BLOOD AND ORGAN DONATION PORTAL WITH VERIFIED HOSPITAL REQUESTS AND DONOR MATCHING

Project Advisor	MS. SUNDAS ASGHAR
Status	In Process of Completion

Blood and Organ Donation Portal is an AI-powered web and mobile platform designed to streamline life-saving donations through verified hospital requests and intelligent donor matching. The system ensures hospital authenticity via digital MOUs, official documentation, and national health database checks, reducing reliance on PHOTA and informal networks. Donors can explore real-time requests filtered by location, blood group, organ type, and urgency, while an AI recommendation engine optimizes matches based on compatibility and distance. To enhance donor care, the platform includes a chatbot that provides recovery guidance, diet and hydration tips, and reminders to encourage safe, repeat donations. Key features include hospital dashboards, donor eligibility tracking, recipient management, and automated notifications to match donors. The portal provides a reliable, scalable, and AI-driven solution that improves response times, builds trust, and ultimately increases donation success rates during medical emergencies.

2249. COMMUNITY GARDENING WEB PLATFORM

Project Advisor	MS. SUNDAS ASGHAR
Status	In Process of Completion

The Community Gardening Web Platform is a comprehensive digital hub designed to strengthen urban gardening communities. It enables enthusiasts to create profiles, share knowledge in specialized forums, and trade resources through an integrated marketplace. A key feature allows users to rent or list garden spaces, increasing accessibility. The platform also includes event management for workshops, photo diaries for progress tracking, and an interactive map to locate nearby gardens and activities. By uniting social, educational, and logistical tools, this solution promotes connected, sustainable, and vibrant urban greening initiatives.

2250. GOLAHORE: AN INTELLIGENT ROUTE ADVISOR FOR MULTIMODAL TRANSPORT

Project Advisor	MS. ZAR BAKHT IMTIAZ
Status	In Process of Completion

GoLahore is a mobile application designed to enhance commuting in Lahore by providing intelligent, offline-capable route guidance. Unlike existing systems, it integrates both formal transport (Metro Bus, Orange Train, Speedo) and informal transport (Qingqis, vans, rickshaws), offering users complete end-to-end navigation. The system is AI-powered, enabling fare and time prediction, hybrid route optimization, and crowdsourced data verification. A unique feature is weather-based path suggestion, which adjusts routes during rainfall, extreme heat, or flooded conditions to prioritize safety and comfort. The solution is designed for inclusivity with Urdu and Roman Urdu support, and it specifically targets low-income groups, women, and students.

2251. DIGITAL FARMER AVATAR: AI-POWERED AGRICULTURAL ASSISTANT

Project Advisor	MS. ZAR BAKHT IMTIAZ
Status	In Process of Completion

Small-scale farmers in Pakistan face significant challenges due to low literacy, poor internet connectivity, and lack of timely agricultural guidance. These barriers lead to

guesswork in crucial decisions such as irrigation, fertilizer usage, pest control, and market timing, resulting in reduced yields and financial stress. The Digital Farmer Avatar: AI-Powered Agricultural Assistant addresses these issues by integrating affordable IoT sensors with an intelligent mobile application designed specifically for low-literacy users. The system combines soil and weather monitoring sensors with a mobile app featuring voice commands in Urdu and Punjabi, icon-based navigation, and offline support. An AI-powered crop disease detection module enables farmers to capture leaf images and receive instant treatment recommendations, while yield prediction models and market price integration empower them to make informed financial decisions. Additional tools such as an expense and profit tracker and a community forum foster financial awareness and peer-to-peer support. The project applies knowledge from Artificial Intelligence, Mobile Application Development, Databases, Software Engineering, IoT Hardware, and Human-Computer Interaction (HCI). Expected outcomes include increased crop yield, efficient resource use, early disease detection, improved financial planning, and enhanced community collaboration. By combining modern AI techniques with localized usability features, this solution aims to make digital agriculture practical, affordable, and accessible to small farmers, ultimately contributing to sustainable agriculture and improved rural livelihoods.

2252. ODYSSEY: YOUR JOURNEY TO GLOBAL SCHOLARSHIPS AND LOCAL EVENTS STARTS HERE

Project Advisor	MS. ZAR BAKHT IMTIAZ
Status	In Process of Completion

2253. AI-CRISISEYE: REAL-TIME ECONOMIC EARLY-WARNING MULTIMODAL AI WITH GLOBAL

Project Advisor	MS. MAHWISH SHAHID
Status	In Process of Completion

PAK-EcoVision is an AI-driven decision-support system designed exclusively for the Pakistani economy. The project aims to predict short-term macroeconomic instability by analyzing multiple real-time indicators such as inflation rates, stock market volatility, unemployment trends, currency depreciation, and trade imbalance. The system integrates diverse local data sources (Pakistan Bureau of Statistics, PSX, State Bank of Pakistan, and economic news) to build a unified, data-driven view of national financial health. Instead of relying on global APIs, all datasets will be collected manually or through locally available CSV datasets and transformed into a custom-built model. Machine learning methods (Random Forest, XGBoost, LSTM) will detect correlations and anomalies indicating early signs of economic stress. The model will output risk levels Low, Moderate, and High along with key contributing factors. The project's output includes a user-friendly web dashboard displaying visual trends and predictions, helping policymakers, investors, and analysts anticipate crises such as rising unemployment, unsustainable debt, or severe inflation. Unlike global systems, PAK-EcoVision focuses

entirely on Pakistan's socio-economic challenges, promoting transparency and self-reliant analytics.

F25-BSSE

2254. FOCUSSPARK: AI CHROME EXTENSION FOR FOCUSED LEARNING, SMART PLANNING AND MINDFUL PRODUCTIVITY

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

FocusSpark – AI Smart Study Assistant is a Chrome Extension that helps students stay focused, plan smarter, and learn better. It addresses distractions and passive studying by combining time management, real-time monitoring, AI-powered learning tools, and gamified goal tracking in one unified platform. It also includes an AI Tutor that can understand and analyze the user's notes, PDFs, or images and automatically generate useful quizzes and flashcards for revision. FocusSpark is built using React.js for the frontend, FastAPI for backend, and PostgreSQL for data storage and integrates AI and Machine Learning tools. This allows the system to adapt to each student's habits, attention levels, and learning progress to make the overall study experience more focused, efficient, and personalized.

2255. CUREPATH AI: AI-BASED HEALTHCARE ASSISTANCE SYSTEM

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

CurePath AI is an AI-powered healthcare platform designed to address the critical communication and diagnostic gaps between patients and healthcare providers. The project integrates multiple AI modules: AI Doctor for primary consultation, AI Test Recommender for suggesting relevant medical tests, AI Image Analyzer for disease recognition through uploaded photos, AI Referral System for nearby doctors, and AI Physiotherapist Coach for exercise guidance using animations. The system also supports English and Urdu languages to enhance accessibility for diverse patients. It offers HIPAA-compliant secure messaging, video/audio consultations, smart scheduling, and role-based dashboards for doctors, patients, labs, and administrators. By combining artificial intelligence, natural language processing, image processing, and healthcare compliance, CurePath AI aims to reduce miscommunication, minimize diagnostic delays, and improve accessibility of healthcare services across hospitals, clinics, and home-care settings.

2256. VISIONMESH: ANALYZING & WEAVING BETTER VISUALS

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

VisionMesh is an AI-powered web application that evaluates and improves UI/UX designs. Users can upload sketches, screenshots, or URLs, and the system provides fast, objective analysis of usability, accessibility, and design quality, overcoming the limitations of traditional manual evaluations.

2257. ARTLENS: TURN EVERY FRAME INTO FINE ART

Project Advisor	DR. ALI SAEED
Status	In Process of Completion

ArtLens is an AI-driven web application that transforms ordinary video frames or images into fine art by applying intelligent style transfer and artistic enhancement techniques. The project combines computer vision and aesthetic design principles to generate visually appealing artwork while maintaining the essence of the original content. ArtLens aims to bridge the gap between technology and creativity, enabling users to experience art generation through artificial intelligence with precision, beauty, and personalization.

2258. LABORIFY: ON-DEMAND SKILLED WORKFORCE PLATFORM FOR INSTANT SERVICE MATCHING AND HIRING

Project Advisor	DR. ANAM MUSTAQEEM
Status	In Process of Completion

Our project, Laborify, is an Android-based on-demand skilled workforce platform designed specifically for Pakistan's informal labor economy. Unlike conventional service apps, Laborify integrates real-time GPS-based worker discovery, commission-free payments, structured worker verification, and chatbot support. Beyond simple service matching, it introduces unique worker IDs. This transforms gig work into a pathway for formalizing the labor sector and enabling professional growth.

2259. DEEPFAKE DETECTOR: WEB APP FOR DETECTING AI-GENERATED VIDEOS

Project Advisor	DR. GULSHAN SALEEM
Status	In Process of Completion

Our web application uses deep learning to detect whether a short video is real or AI-generated. It extracts frames using OpenCV and analyzes each one with a binary classification model that labels them as real or fake with a confidence score. To enhance transparency, the system incorporates Explainable AI (XAI), providing heatmaps that highlight suspected manipulations and explain why a frame is flagged as fake. Each frame includes a brief summary of its authenticity, with fake ones offering both visual and written justifications. After processing all frames, the app generates a final summary verdict for the entire video. The frontend, built with React, delivers a clean, responsive user experience. Designed specifically for short, audio-free videos, the tool focuses on detecting visual manipulation with an expected accuracy of up to 85%, offering a practical solution for verifying video authenticity.

2260. EMOTISIGN

Project Advisor	DR. GULSHAN SALEEM
Status	In Process of Completion

EmotiSign is a mobile and web-based application designed to bridge the communication gap between the hearing and the deaf communities. Unlike existing solutions, it incorporates an emotional dimension to ensure that conveyed messages capture both meaning and sentiment. The system supports complete American Sign Language and partially supports Pakistan Sign Language, enabling more natural and expressive communication. To achieve this, the project uses computer vision for sign recognition, NLP for sentiment analysis, and multimodal integration across web and mobile platforms. The outcome will be an inclusive communication tool that translates signs into text/speech or text/speech into signs and also preserves emotional context to provide more natural interactions.

2261. HEALWISE: AN AI-POWERED DIGITAL HEALTH COMPANION

Project Advisor	DR. GULSHAN SALEEM
Status	In Process of Completion

HealWise is an AI-powered digital health companion designed to make healthcare accessible, affordable, and user-friendly for everyone in Pakistan. The system enables users to communicate with an intelligent assistant using either Urdu or English, through both voice and text. By leveraging advanced AI models such as BioBERT and ClinicalBERT, HealWise analyzes symptoms and provides accurate, personalized health suggestions. The application also features real-time speech recognition, a doctor consultation panel, and affordable medicine alternatives. By integrating AI intelligence with human expertise, HealWise bridges the gap between technology, patients, and healthcare professionals empowering individuals to take charge of their health confidently and safely.

2262. ETERNAL CARE

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	In Process of Completion

Eternal Care is Pakistan's first digital platform designed to modernize end-of-life services and graveyard management. The project addresses the difficulties families face in finding burial plots, arranging funeral services, and accessing verified providers under emotional stress. It also tackles the inefficiencies of manual graveyard management, including lack of transparency, corruption, and absence of digital grave records. The proposed mobile application will enable grave search, digital records, GPS-based graveyard mapping, and booking of funeral services through a user-friendly interface. By integrating families, service providers, and graveyard administrations into one system, Eternal Care ensures transparency, accessibility, and dignity.

2263. MY PATH

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	In Process of Completion

My Path is a smart web application designed to help students find the best education and career options based on their personal information. The idea is to guide students in the right direction by looking at their academic results, financial situation, interests, and location. Once a student fills in their details, the platform gives personalized suggestions for colleges, universities, or career paths that match their goals and circumstances. Unlike many general tools that give the same advice to everyone, My Path focuses on making recommendations that actually fit each student's unique background and needs. The app also includes an optional paid consultancy service, where students can talk to experts one-on-one. This is helpful for those who want detailed support—for example, with choosing the right field, applying to universities, or planning their future career. In today's world, where many students don't have easy access to career counseling, My Path offers a simple, affordable, and reliable way to make better, informed decisions about their future.

2264. SKILLNEST: WHERE EVERY SKILL FINDS A HOME

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	In Process of Completion

SkillNest is a bilingual (Urdu + English), AI-driven skill marketplace designed to empower underserved communities in Pakistan, especially women from rural and conservative areas. Existing platforms such as Fiverr, OLX, and Facebook Marketplace fail to address local needs, including bilingual access, secure job progress tracking, wallet-based payments, and cultural requirements such as gender-visibility filters. The project combines MERN stack development, AI/NLP modules, and Firebase-based real-time communication to provide a secure, inclusive ecosystem. Users can create social-style service profiles, employers can post jobs, and both parties interact through a built-in escrow wallet system that ensures amount security. An admin web panel will support monitoring, user verification, dispute resolution, and platform trust-building. The uniqueness of SkillNest lies in its AI-driven features: intelligent job and mentor matching, Urdu/English voice navigation for low-literacy users, and fraud/spam detection to ensure platform safety. Real-time mentorship sessions, integrated with the in-app wallet, enable learners and service providers to grow their skills while earning. By integrating software engineering, AI, NLP, and secure system design, SkillNest aims to deliver a culturally relevant, technically advanced platform that promotes digital inclusion, financial independence, and community-driven skill development.

2265. OPTICODES: DESKTOP AI TOOL FOR PLANNING AND GENERATING WEB APPLICATIONS

Project Advisor	DR. HAFIZ MAHFOOZ UL HAQUE
Status	In Process of Completion

OptiCodex is a desktop-first, offline-capable proof-of-concept that translates plain-English goals into modular, production-oriented web applications (database, backend, frontend) under developer supervision. It integrates a planning-first Directed Acyclic Graph (DAG) to decompose goals into nodes, a persistent local vector-based knowledge graph for project context (Qdrant), and node/project-level conversational interfaces. Node generation is powered by adapted open-source LLMs specialized for the TypeScript/JavaScript stack via adapter fine-tuning (LoRA/QLoRA), controlled pruning,

and optional distillation. The UI embeds Monaco Editor for human-in-the-loop editing and uses validation, retry logic, and PM2 runtime hooks to ensure generated modules run and integrate correctly.

2266. NEXA: CHATBOT AND WEBSITE BUILDER

Project Advisor	DR. NABEEL SABIR
Status	In Process of Completion

NEXA is an AI-powered chatbot designed to provide intelligent and human-like interactions. The system uses natural language processing (NLP) and deep learning techniques to understand user queries and respond effectively. It aims to assist users by delivering accurate, context-aware, and personalized responses, enhancing accessibility and efficiency across various domains.

2267. NEUROLOG: AN AI-POWERED WEB APP FOR MENTAL WELLBEING MONITORING AND PERSONALIZED SUGGESTIONS

Project Advisor	DR. NAUMAN MAZHAR
Status	In Process of Completion

euroLog is an AI-powered web application designed to monitor and improve users' mental wellbeing. It allows users to answer daily questions or journal entries that are analyzed using Natural Language Processing (NLP) and Machine Learning to detect emotional states such as stress, anxiety, or positive mood. Additionally, it employs image-based real-time emotion recognition through facial expression analysis. Based on these insights, the system provides personalized recommendations related to exercise, diet, social interaction, and sleep. NeuroLog aims to offer an accessible, intelligent, and adaptive platform for continuous mental health monitoring and early intervention.

2268. INTELLIGENT CONSTRUCTION ESTIMATION AND MAP GENERATOR SYSTEM (ICEMGS)

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

This project aims to develop an Intelligent Construction Estimation and Map Generator System (ICEMGS). The system allows users to quickly estimate the cost of building a house and automatically generate a 2D floor plan. It reduces dependency on manual estimations and contractors by providing accurate material lists, cost breakdowns, and compliance with construction bylaws such as LDA regulations. Users input plot size, number of rooms, bathrooms, kitchens, and other details, and the system provides Grey and Finished structure cost comparisons, future cost predictions, and exportable reports.

2269. INTELLIBID: AI WEB BIDDING SYSTEM

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

IntelliBid is an AI-driven web-based auction platform designed to modernize traditional bidding systems. The platform introduces innovative features such as AI-based price

estimation, auto-category detection, automatic product description generation, a 3D product viewer, auction replay visualization, and product verification badges. By integrating artificial intelligence, real-time interaction, and user-friendly design, IntelliBid aims to provide a secure, transparent, and engaging auction experience.

2270. AI BASED PSYCHOLOGICAL ASSESSMENT SYSTEM

Project Advisor	MR. ABID BASHIR
Status	In Process of Completion

AI-Based Psychological Assessment System is a smart web application designed to assess and analyze a person's mental health using AI. It uses Natural Language Processing(NLP) and Machine Learning(ML) algorithms to understand user responses from questionnaires, voice tone, and behaviour. The main goal is for detection of signs of mental health conditions like stress, anxiety, depression, and other psychological disorders across all age groups. The system aims to provide a private, easy-to-use, and cost-friendly mental health tool that helps users professional feedback and support

2271. FORENSIC TIMELINE RECONSTRUCTOR: EVIDENCE ORGANIZER

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

Investigators often spend too much time manually checking metadata from different file types like Word documents, PDFs, images, and logs. This project develops an Automated Digital Forensic Timeline Generator that extracts and have consistent metadata to create a chronological timeline of events. Using concepts from digital forensics, databases, and data visualization, the project aims to deliver a practical tool that speeds up case analysis and reduces errors.

2272. TASTESCOPE: AI-POWERED REVIEW SCRAPER & ANALYZER

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

TasteScope is an AI-driven web application developed to analyze and interpret public reviews from platforms such as Google Reviews and TripAdvisor. The system employs Natural Language Processing (NLP) techniques to automatically generate concise summaries that highlight key aspects, including recommended items, staff performance, and frequently reported issues. In addition to text-based analysis, the application presents visual insights through sentiment distribution charts, trend graphs, and keyword analysis. Unlike existing platforms that only display raw reviews, TasteScope unifies fragmented feedback across multiple sources and transforms it into actionable insights. The novelty lies in its ability to aggregate scattered data, apply AI-powered sentiment analysis, and present results in the form of dashboards, graphs, and word clouds.

2273. BOOK EX: COMMUNITY BASED BOOK EXCHANGE AND SALE

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

BookEx is a community-driven web application designed for exchanging books—buying, selling, donating, and trading—while enabling real-time user interaction through messaging, discussions, and moderation. It uses a dedicated Socket.IO server for real-time communication, managing chat rooms, authentication, user presence, and message persistence in MongoDB with input validation, sanitization, and rate limiting. Smart notifications are stored and delivered only when users are inactive in a chat, and unread indicators sync accurately across tabs. Built with Next.js 15, React 18, Tailwind CSS, Socket.IO, MongoDB, NextAuth, and optional Redis, the app maintains strict TypeScript, ESLint, and security configurations. Supporting scripts streamline database setup and concurrent server operations. The platform ensures secure, scalable, and seamless real-time engagement for book enthusiasts, with reliable notifications, community events, and optimized performance across multiple devices.

2274. LEXAI: LEGAL DOCUMENT ANALYZER

Project Advisor	MR. ALI HAIDER ARIF
Status	In Process of Completion

LexAI is a mobile app that helps people understand complex legal and contract documents in simple language. Many individuals in Pakistan sign rental agreements, job contracts, or business deals without fully understanding the terms, penalties, or restrictions written in them. Hiring a lawyer is often costly, and most people don't have access to proper guidance. Our app allows users to upload documents as images or PDFs. It first checks if the file is relevant (legal/contract document) or irrelevant (random images or unrelated files). Relevant documents are then processed through OCR to extract text and NLP to analyze the content. The app highlights important clauses, boundaries, and penalties, and explains them in easy English and Urdu. LexAI also has a chatbot where users can ask questions about their documents. Extra features include bookmarking, personal notes, offline access to past chats summaries, and simple explanations of legal terms.

2275. VIBEBOOK: A SMART MOBILE APP

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

VibeBook is a modern mobile application that bridges the gap between event discovery, personal event planning, and social interaction. It provides users with a unified platform to explore public events, organize private gatherings, and stay socially engaged through interactive content. The app is designed for both event organizers and everyday users, combining the functionality of event booking apps with the dynamic user experience of social media platforms. To enhance personalization and efficiency, VibeBook includes AI-based smart features. The Smart Suggestions Engine analyses user behaviours, preferences, and location to suggest relevant public events, helping users discover local happenings without actively searching. Additionally, the app offers an AI-generated caption tool for vendors, where they input 2–3 keywords, and the system generates an

event description. This saves time and ensures that even small vendors can produce attractive, professional posts.

2276. BIDIFY: CELEBRATE, BID, OWN UNIQUE

Project Advisor	MR. HAIDER SULTAN AHAD
Status	In Process of Completion

Bidify is an online auction platform built for Pakistani artists, crafters, collectors, and buyers who value authenticity, creativity, and uniqueness. The system enables sellers to display their handcrafted products and collectible items, while buyers can engage in secure, transparent, and real-time bidding. To counter the issue of fake bidding, Bidify introduces mandatory CNIC-based identity verification using NADRA's Pak Identity app, ensuring that every participant is a real, traceable person.

2277. TEACHXCHANGE

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

TeachXchange is a web-based platform that allows people to share and exchange their skills with each other in a fair and free way. TeachXchange promotes learning through direct exchange of knowledge. For example, if someone knows graphic design and wants to learn JavaScript, they can connect with another user who knows JavaScript and is interested in learning design. In this way, both learners benefit without spending money. The platform will provide real-time learning through video calls and also asynchronous learning where lessons can be recorded or shared in messages. Artificial intelligence will be used to verify whether users truly have the skills they claim, and gamification features like points and badges will be added to make the experience fun and motivating. The project aims to create a functional prototype that encourages peer-to-peer learning, builds trust through AI verification, and creates a global learning community that is free and accessible to everyone.

2278. SMARTPREP: AI INTERVIEW COACH FOR TECH JOB SEEKERS

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

SmartPrep is a mobile-first AI mock interview application designed to help students and job seekers prepare for real-world technical interviews. Unlike static mock interview apps, SmartPrep uses an AI Template-Hybrid approach: domain-specific templates ensure structured and industry-relevant questions, while AI adapts follow-up questions and difficulty based on user performance. The system evaluates both technical knowledge and soft skills by analyzing voice clarity, tone, confidence, and when video is enabled basic body language cues. After each session, the app generates a detailed feedback report with scores and personalized suggestions. The primary platform will be a mobile app (React Native), with a web version (React) developed as a secondary product for accessibility. The backend will be built with the MERN stack, while AI modules will be implemented in Python for NLP, sentiment, and scoring.

2279. UNIVERSITY ADMISSION ASSISTANCE AND MANAGEMENT SYSTEM (UAAMS)

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

University admission processes in Pakistan are fragmented, time-consuming, and require students to repeatedly fill in similar personal, academic, and financial details across multiple university portals. This leads to data redundancy, errors, missed deadlines, and lack of informed decision-making due to scattered information. The proposed University Admission Assistance and Management System (UAAMS) centralizes the entire admission workflow by allowing students to create a single digital profile that can be used to automatically fill admission forms of multiple universities. UAAMS integrates web data extraction, auto form filling, dashboard for university representative to manage and process application, and a rule-based recommendation engine to suggest suitable universities based on academic merit, eligibility criteria, fee structure, and program availability. The system is built using React.js for the frontend, Node.js/Express for backend services, POSTGRESQL/MongoDB for hybrid data storage, and Cheerio for web scraping. Additionally, UAAMS offers a portal for universities to configure their admission forms, publish announcements, and upload roll number slips, while students can track applications, receive notifications, and optionally submit payments through integrated gateways (JazzCash/Stripe). The expected outcome is a unified platform that reduces manual effort, minimizes submission errors, increases applicant-university engagement, and enables data-driven decision making. UAAMS aims to enhance accessibility and transparency in admissions while significantly improving user experience for both students and university administrators.

2280. DINE DESIGN: SAAS PLATFORM FOR RESTAURANT WEBSITE TEMPLATES

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

DineDesign is a SaaS platform providing Pakistani restaurants with ready-to-use, customizable website templates, a customer mobile app for ordering and reservations, and an admin dashboard. It includes local payment gateways, WhatsApp/SMS notifications, loyalty programs, and AI features to help restaurants reduce reliance on commission-based aggregators.

2281. CAREERFORGE

Project Advisor	MR. KHIZER HAYAT
Status	In Process of Completion

CareerForge is an AI-powered career development and learning platform that bridges the gap between students, job seekers, educational institutions, and employers. It helps users identify the right career path by providing a unified space for learning, job search, and interview preparation through personalized AI recommendations and virtual interview assistance.

2282. MUSIC CONNECT: AI-POWERED PLATFORM FOR LOCAL MUSIC & POETRY

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

MusicConnect is an AI-powered mobile app designed to promote and preserve the work of local music and poetry artists. By using geolocation, machine learning, and generative AI, it offers cultural tagging, geofenced playlists, smart booking, and monetization. The project combines mobile development, artificial intelligence, and cloud technologies for in-app concerts in the form of live streams with ethical AI practices to ensure fairness and artist control. Expected outcomes include greater visibility, income opportunities, and preservation of cultural heritage through a digital archive.

2283. LIFESYNC: AI-POWERED VOICE BASED DAILY ASSISTANT

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

Existing voice assistants such as Siri, Alexa, and Google Assistant are limited by internet dependency, rigid English-based commands, and a focus on individual use. These shortcomings make them unsuitable for users in low-connectivity regions and for those who require natural interaction in their native language. LifeSync is a mobile voice assistant designed to work fully offline while supporting natural Urdu and English commands. Along with reminders, scheduling, and note-taking, it introduces team collaboration features such as task assignment and notifications. The project integrates speech recognition, natural language processing, mobile development, and databases. The expected result is a mobile application that simplifies productivity for individuals and teams, offering hands-free interaction without reliance on the internet.

2284. VIRQA: VOICE BASED INTELLIGENT REAL-TIME QUESTIONING SYSTEM

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

VIRQA is an AI-powered, voice-based interview platform designed to conduct and evaluate real-time oral assessments using advanced language and speech models. The system dynamically generates domain-specific questions, transcribes spoken responses, and evaluates candidates based on semantic accuracy, fluency, tone, and confidence. It provides employers with interactive dashboards, detailed performance reports, and adaptive feedback to streamline recruitment and training processes. By integrating large language models (LLMs), speech recognition, and sentiment analysis, VIRQA enhances fairness, scalability, and efficiency in modern digital interviewing environments.

2285. SYNTHEA: THE CODING ASSISTANT

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

Synthea is a voice-powered programming platform. Users can generate, edit, refactor, and get explanation of Python and C++ codes entirely by voice or text. It features advanced AI for code generation, refactoring and code explanation

2286. MEDICOMPANION: PLAIN LANGUAGE, REAL HELP

Project Advisor	MR. M. TAYYAB MIR
Status	In Process of Completion

The project aims to develop MediCompanion, a medical AI application that can provide accurate and understandable medical information in plain English. Inspired by the PLABA Biomedical NLP Challenge, the system will answer users' query, simplify medical articles, and offer general medical literacy support for laypeople. The application will be fine-tuned on selected PubMed dataset using biomedical NLP models such as BioBERT, PubMedBERT, and BioGPT, along with Q/A datasets of ChatDoctor (a medical application of US) available on Hugging Face. The system emphasizes simplicity, authenticity, and factual accuracy while being computationally feasible at the undergraduate level. Evaluation will be carried out through fact-checking, manual verification by doctors, and similarity-based metrics. The project combines applied machine learning, natural language processing, and software development, aiming to contribute both academically and practically.

2287. AGRITRADE: ONLINE AGRICULTURAL TRADING PLATFORM

Project Advisor	MR. M. ZAHID HUSSAIN
Status	In Process of Completion

Agri-Trade is a mobile-first platform designed to revolutionize the way farmers and factories connect for agricultural trading in Pakistan. Currently, trading is dominated by manual practices and middlemen, leading to unfair pricing, miscommunication, and delays. Agri-Trade introduces a secure mobile application where farmers can directly list their crops with details and images, and factories can browse, filter, and make offers. The platform integrates Artificial Intelligence (AI) to classify crop images and assess quality, ensuring fair and transparent trading. Additional features include secure farmer and factory dashboards, a chatbot for support, integrated transportation services for logistics, and a feedback system to build trust. Agri-Trade will empower farmers with fair access to buyers while providing factories with efficient sourcing, ultimately promoting transparency, fairness, and digitalization in Pakistan's agriculture sector. Agri-Trade is a mobile-first platform that connects farmers and factories directly, enabling fair and transparent agricultural trading in Pakistan. With AI-based crop classification, secure dashboards, and integrated logistics, it removes middlemen and makes sourcing faster and more reliable.

2288. HELPING HAND

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Food, clothing, and blood aren't luxuries; they are the foundation of a safe, healthy, and dignified life. There are so many white-collar individuals who are needy but can't ask for

help and are too shy to come up to the front. These are people who may appear financially stable, they might be educated, working low income jobs, or from formerly better off families, but silently struggle to afford food, clothing, and basic necessities. They have no one to support them, and because of societal pressure and fear of judgment, they avoid seeking help to protect their dignity. Helping Hand aims to bridge the gap between surplus resources and communities in need by leveraging technology for efficient, respectful, and transparent redistribution. In Pakistan, approximately 40% of food is wasted annually while 37% of the population faces food insecurity. Alongside, thousands of tons of wearable clothing are discarded, hospitals struggle with urgent blood shortages, and many low income individuals or students silently face financial hardships. Current donation systems are fragmented, manual, or lack real time coordination, leaving significant gaps in accessibility and dignity for recipients. Helping Hand addresses this by providing a unified mobile application that integrates food redistribution, clothing donations, blood donation coordination, and confidential community help requests. Using geolocation, instant notifications, and smart matching, the system ensures that surplus resources are directed to verified recipients based on urgency and location. Donors and organizations are further supported with features such as real time feedback, trust scoring, flexible donation modes, and event/campaign management for large scale drives. This project combines concepts from software engineering, mobile app development, databases, and algorithm design to create a scalable, user-friendly solution. The expected outcome is a transparent and reliable platform that fosters a circular economy where surplus resources are effectively utilized, ensuring that every meal, piece of clothing, blood donation, or financial contribution directly improves lives while maintaining the dignity of those receiving help.

2289. PENNYWISE: INTELLIGENT SHOPPING & BUDGETING PLATFORM

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Online shopping in Pakistan is expanding rapidly, offering access to a wide range of products across platforms such as Daraz, PriceOye, Naheed, and Al-Fatah. However, the experience remains scattered and inefficient. Buyers must manually compare prices, while small sellers struggle with fair pricing and visibility. PennyWise: Intelligent Shopping & Budgeting Platform is developed as a mobile application to address this gap. It unifies product listings from multiple online stores, compares prices automatically, and provides budget-aware recommendations through an interactive chatbot assistant. The system focuses on key shopping categories including electronics (mobile phones, laptops, tablets, earphones), fashion (clothing, shoes, jewelry, bags), and home & kitchen (small appliances, cookware). It includes features such as a chatbot shopping assistant, multi-store aggregation, price drop alerts, and a seller dashboard offering detailed pricing insights. Buyers save time and find the best deals, while sellers gain tools to stay competitive. This project applies data processing, web scraping, information retrieval, and data analysis techniques to create a localized, intelligent, and user-friendly e-commerce ecosystem for Pakistan.

2290. FLAVOR HAUS

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Flavor Haus is a web-based platform designed to connect guests with hosts who prepare and share home-cooked meals. It addresses the lack of structured and trustworthy social dining solutions in Pakistan, where current applications focus mainly on convenience and delivery rather than interaction and cultural exchange. The system incorporates secure booking, personalized menu management, allergy-aware recommendations, calorie estimation, reviews, and integrated payment gateways. By employing modern technologies such as React.js for the frontend, Nest.js for the backend, and MongoDB for database management, the project ensures usability, scalability, and reliability. The significance of this work lies in empowering home chefs with economic opportunities, promoting authentic dining experiences, and fostering cultural exchange through meaningful human interaction. The expected outcome is a user-friendly and community-driven platform that transforms dining from a transactional service into a personalized, trust-based, and socially engaging experience.

2291. LEXIFY

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

Lexify is a user-centered legal assistance platform designed to simplify access to justice. Existing platforms like AskWakeel, YourMunshi, and E-Katchery limit user choice, charge high consultation fees, and lack interactive tools such as chatbots and multilingual support. Lexify addresses critical gaps in existing services by enabling users to search for and select lawyers based on location and specialization, access a bilingual (English/Urdu) database of legal articles and sections, and receive instant guidance via an AI-powered chatbot. A personalized client portal will centralize case management. The project will leverage web development, database management, and natural language processing. The expected outcome is a functional prototype that simplifies legal help, making it more transparent, affordable, and accessible, particularly for underserved groups like women.

2292. CLEARCLEVER: CLARITY IN COVERAGE. CONFIDENCE IN CHOICE

Project Advisor	MR. MOHSIN SAMI
Status	In Process of Completion

ClearClever is a web-based insurance aggregation platform designed to simplify the process of selecting insurance policies in Pakistan. Currently, users must visit multiple insurer websites or depend on agents to understand options, resulting in biased guidance and limited transparency. ClearClever solves this by providing a centralized platform where users can view, compare, and evaluate policies from multiple insurance providers side by side. It enables selection across various categories including auto, life, health, home, commercial, and education insurance. The outcome is a platform that promotes transparency, efficiency, and user trust in the insurance sector.

2293. UNIBRANDCONNECT: BRIDGING COMPANIES & STUDENT MARKETERS

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

Traditional marketing strategies struggle to engage university students, who are more influenced by peer recommendations and social interactions. Companies face challenges in reaching this demographic effectively, while students lack structured opportunities to benefit from brand promotions. UniBrandConnect is a digital platform where companies launch student-driven campaigns, and students promote products within their networks to earn commission-based rewards. The system integrates secure referral tracking, AI-powered recommendations, real-time analytics, gamification, and automated commission payouts. Expected outcomes include entrepreneurial opportunities for students, cost-effective reach for companies, and stronger collaborations between academia and industry.

2294. CHARMCHIME: CHIMES OF IMAGINATION, STORIES OF WONDER

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

Children today face growing emotional and social challenges but often lack the tools to understand, express, and manage their feelings in a safe and engaging way. Traditional journaling methods, while beneficial, are passive and do not provide the interactive support that modern children expect. While some digital platforms offer journaling or educational activities, they often lack the emotional intelligence, creative stimulation, and personalization needed to truly engage young minds. Many existing platforms are either designed for adults or focus narrowly on productivity, failing to create a child-friendly environment that encourages self-reflection, emotional awareness, and creativity. These tools typically do not adapt to a child's emotional state, offer storytelling support, or provide a sense of companionship that could keep them engaged over time. As a result, children may lose interest quickly, miss out on valuable opportunities for emotional development, or never form the habit of healthy self-expression. Additionally, parents and educators are left without meaningful insights into a child's emotional well-being or creative growth unless they are directly involved in every interaction. This lack of visibility into a child's mental and emotional patterns makes early support more difficult. There is a clear gap in emotionally intelligent, interactive journaling solutions tailored to children one that CharmChime aims to fill by creating a safe, engaging, and intelligent digital companion.

2295. FLEX: FACIAL & LIGHT EXPERIENCE EXTENSION (SMART ADAPTIVE BROWSER EXTENSION USING FACIAL AND GAZE DETECTION FOR USER-CENTRIC DISPLAY OPTMIZATION)

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

FLEX – Facial & Light Experience Extension is a smart browser extension designed to enhance user comfort and accessibility by automatically adjusting display settings such as brightness and zoom level based on real-time facial and gaze detection. Using the system's webcam and lightweight, browser-compatible AI models like face-api.js, TensorFlow.js, and WebRTC, the extension detects the user's presence, distance, and gaze orientation to dynamically modify the browser's visual environment. The system

simulates brightness adjustment using CSS overlays and controls page zoom with document.body.style.zoom, adapting instantly to the user's behavior and screen proximity. This ensures optimal readability, comfort, and reduced eye strain, particularly during extended browsing sessions or in changing lighting conditions. FLEX promotes health-aware, accessible, and user-centric browsing, requiring no additional hardware and performing all AI processing locally within the browser, ensuring both privacy and real-time adaptability.

2296. TAPUNITY: UNIFYING CAMPUS WITH ONE SMART TAP

Project Advisor	MR. SHAH NAWAZ
Status	In Process of Completion

TapUnity is a mobile application designed to replace traditional university ID cards with a secure, digital alternative.

2297. SPORTSSPHERE: YOUR AI BADMINTON ASSISTANT

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

SportsSphere is a web-based platform designed to connect badminton players, coaches, and organizers in Pakistan. It aims to simplify the management of badminton activities such as court and coach bookings, sparring sessions, and tournament organization. The system integrates an AI chatbot for instant assistance, ensuring a smarter and more interactive user experience.

2298. SPARESHARE: WEB PLATFORM FOR FOOD, GROCERIES, HOUSHOLD ESSENTIALS, CLOTH AND APPLIANCES

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

SpareShare is a web platform where individuals, restaurants, and households can share extra food and useful household items. NGOs and people in need can request and collect available items nearby. The goal is to reduce waste and help communities with quick and easy sharing.

2299. AI SYSTEM FOR RICE BLAST DETECTION

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

A mobile app is being developed to help Pakistani farmers detect Rice Blast disease using AI-based image recognition. Farmers can capture rice leaf images, receive instant classification as healthy or infected, and get treatment guidelines in Urdu text and audio with affordable, locally available solutions. A community chat system with voice messages enables farmers to share experiences, ask questions, and support each other.

Scope is limited to one crop (Rice) and one disease (Rice Blast) to ensure accuracy, impact, and feasibility.

2300. SOULIFY: EMBRACE YOUR INNER PEACE

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

Problem: Modern life causes increasing stress, anxiety and emotional imbalance for many people. Existing mental health BS Program: BSCS BSSE BSDS BSAI Term of Registration: Fall 2025 Spring _____ Tools to be used: Frontend:React.js, Chart.js Backend:Node.js, Express.js, Python (NLP) Database: MongoDB Mood-Detection:Hugging Face models Automation: N8N Auth&Version Control: JWT, Git/GitHub F25 University of Central Punjab (Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab) Faculty of Information Technology and Computer Science PROJECT OFFICE FORM FOR BS PROJECT IDEA AND GROUP ALLOCATION apps mostly focus on data tracking or generic advice but often miss personalized, meaningful support that addresses deeper emotional and spiritual needs. People lack a simple, accessible tool that not only detects their mood but also offers customized spiritual guidance and actionable insights to help them cope and grow emotionally. Related Work: Several existing applications provide mood tracking, chatbot interaction, or spiritual guidance separately. For example, Woebot and Wysa offer AI-driven mental health chatbots that focus on cognitive behavioral therapy techniques but lack deep spiritual or personalized emotional support. Apps like Calm and Headspace provide guided meditations and spiritual content but do not use real-time mood detection or behavioral analysis. Mood tracking apps such as Moodfit and Daylio collect user mood data and generate reports but usually rely on manual user input rather than automated behavioral or textual analysis. Most current solutions either focus on mental health through clinical or meditation approaches or offer mood tracking without combining these with personalized spiritual advice.

2301. LHRSEHAT: SMART HEALTHCARE & EMERGENCY ASSISTANCE SYSTEM FOR LAHORE

Project Advisor	MR. TAIMOOR HASSAN
Status	In Process of Completion

LhrSehat is a smart healthcare and emergency system for the people of Lahore. It helps solve problems like hard to access health information, delays in emergencies, and managing donation safely. The system allows users to check their symptoms, get suggestions for the right hospitals, read health tips, donate blood or organs, contribute money, and get emergency help. Features like reminders, eligibility checks, and reliability scores make the system safe and easy to use. Using verified hospital data and Google Maps, LhrSehat guides users quickly and accurately. It is personalized, available in Urdu and English, and helps make healthcare easier, faster, and more reliable for everyone in Lahore.

2302. SOOTHEU: AI EMOTION REGULATION & MENTAL HEALTH ASSISTANCE

Project Advisor	MR. ZAIN ASGHAR
Status	In Process of Completion

Mental health disorders affect a vast number of people globally – WHO reports over 1 billion individuals living with mental health conditions[1]. In low- and middle-income countries (LMICs), more than 80% of these patients reside, often with limited access to care[2][1]. Existing mobile apps and self-help tools are growing in number, but they usually provide only generic coping tips and do not seamlessly link users to professional help. SootheU addresses this gap by delivering a unified, web-based platform that combines an AI-driven chatbot for personalized emotion regulation with a portal to connect users to certified therapists. The system uses a React front-end with an avatar interface and a Django/Python back-end. It employs Hugging Face Transformer models (with NLTK and Scikit-learn) for real-time sentiment analysis and coping suggestions, plus PyJokes for context-sensitive humor. On the administrative side, it includes a therapist directory with secure appointment scheduling and Stripe-based payment. Expected outcomes include an engaging, AI-integrated web application that monitors mood and provides tailored support, significantly improving user well-being and streamlining access to professional care.

2303. AUTO MORF AI

Project Advisor	MS. AFIFA HAMEED
Status	In Process of Completion

The AutoMorf AI car modification app uses artificial intelligence to transform 2D car images into customized 3D models. Users can modify features like wheels, paint, and accessories, visualizing changes in real-time.

2304. SYNCLUENCE: AI-POWERED INFLUENCER BRAND MATCHMAKING PLATFORM

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	In Process of Completion

Syncluence is a web-based AI-powered platform that automates the process of connecting influencers with brands.

2305. MINDMESH: AI-POWERED WORKSPACE

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	In Process of Completion

MindMesh is an AI-assisted project planning system that automatically converts meeting discussions into structured requirements and project tasks. The system uses speech-to-text transcription and natural language processing to extract key decisions and generate organized sprint plans. This reduces manual effort in requirement gathering, improves task clarity, and enhances project execution efficiency.

2306. SKINZY: AI-POWERED SKIN CARE AND WELLNESS APP

Project Advisor	MS. MADIHA YOUSAF MALIK
Status	In Process of Completion

Skinzy is an AI-powered web application designed for Pakistani users to address common skincare challenges caused by weather, pollution, and lifestyle factors. The platform

performs facial analysis to detect issues such as acne, pigmentation, dryness, and oiliness, then generates personalized skincare routines with Halal and affordable product recommendations from local and global brands. It also offers routine tracking, dermatologist appointment booking, and a community forum for user interaction. On the research side, Skinzy fine-tunes AI models on localized datasets, contributing both as a practical solution and an academic exploration of AI in skincare.

2307. SENTIVIBE: WHERE MOODS MEET MEDIA

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

Sentivibe is a MERN-based mobile app that detects emotions through facial, voice, or text input and plays Spotify music, YouTube music videos, or recommends movies. A built-in chatbot guides users, collects preferences, and makes the experience interactive. The system also logs media sessions to create a mood history dashboard for personalization.

2308. NUTRIFLEX

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

NutriFlex is a mobile fitness application that provides users with personalized workout routines and diet plans based on their body metrics, fitness goals, and preferences. The app integrates AI-driven analytics to generate adaptive plans, track user progress, and offer health insights.

2309. VOICE-ENABLED MATHEMATICS LEARNING APP FOR CHILDREN

Project Advisor	MS. MAHAM MEHER AWAN
Status	In Process of Completion

Voice-Enabled Mathematics Learning Application MathTalk is a voice-command-based educational application designed to facilitate mathematics learning for children aged 3 to 10 years. Addressing the need for engaging and accessible early learning tools, this project leverages cutting-edge Speech-to-Text (STT) and Text-to-Speech (TTS) technologies to create a hands-free, interactive learning environment. The application's core architecture is structured around four primary modules: User Registration & Access: Secures the platform through Parent/Guardian login and manages individual Child Profiles to ensure age-appropriate curriculum delivery. Voice Input & Lesson Delivery: Utilizes a robust Voice API to transcribe a child's spoken answers and commands, and dynamically retrieves and presents curriculum-aligned math problems using clear voice prompts. Answer Evaluation & Progress Logging: Provides real-time, adaptive feedback by comparing parsed answers to stored solutions. It maintains detailed Performance Logs to track mastery, calculate scores, and automatically adjust the learning difficulty, facilitating a truly personalized educational experience. Reporting & Management: Offers parents comprehensive visual reports on their child's progress and enables curriculum administrators to manage and update the extensive library of math content. By focusing on a natural conversational interface, MathTalk aims to overcome literacy barriers common in this age group, fostering confidence and engagement in numerical and

arithmetic skills through a gamified, auditory learning approach. The project prioritizes robust data handling, accurate voice parsing, and responsive adaptive learning algorithms to deliver an effective and enjoyable educational product.

2310. TRANS PAK

Project Advisor	MS. MAHAM NOOR
Status	In Process of Completion

The logistics and freight industry in Pakistan is the backbone of trade and economic activity, yet it remains highly fragmented and inefficient due to outdated manual processes. Trans PAK is a comprehensive digital loadboard platform designed to modernize freight operations by connecting shippers, carriers, and brokers on a single marketplace. The platform introduces real-time GPS tracking, escrow-based secure payments, automated load matching, and digital documentation (BOL, POD). By localizing global best practices (DAT, Convoy, Truckstop) and integrating local solutions (EasyPaisa, JazzCash), Trans PAK addresses challenges of transparency, empty miles, fraud, and lack of trust. This initiative aims to empower independent truckers, streamline logistics, and build a sustainable digital freight ecosystem in Pakistan.

2311. DEPOLIFY: YOUR GO TO CLOUD DEPLOYMENT SOLUTION

Project Advisor	MS. MUBASHRA ANWAR
Status	In Process of Completion

Deploying a complete application today often feels harder than building it. Developers have to manage frontend hosting, backend services, databases, build pipelines, and server configurations. These tasks demand time, money, and specialized DevOps knowledge; these are barriers that can slow down or discourage small teams, students, and independent developers. This project aims to solve that problem by creating a one-click deployment platform where a user only needs to provide a repository link. The system will automatically build the frontend, run the backend, set up a database, and serve everything under a secure URL. By removing the technical hurdles of deployment, the platform allows users to focus on building features rather than configuring infrastructure. The work will draw on knowledge areas such as software engineering, web frameworks, databases, cloud computing, containerization, automation, and networking. The expected outcome is a functional prototype that demonstrates seamless deployment of full-stack applications with minimal effort from the user, highlighting a practical and innovative solution to a real-world challenge.

2312. ELDERCARE CONNECT

Project Advisor	MS. NABEELA KHALID SIDDIQUI
Status	In Process of Completion

ElderCare Connect is a web-based portal designed to strengthen the connection between elderly residents in care facilities, their caregivers, and their families. A common challenge in eldercare is that once residents are admitted, many families gradually reduce contact, leaving loved ones feeling neglected. This project addresses the issue by ensuring families receive daily, structured updates on their relatives' wellbeing, thereby promoting consistent engagement. The system enables staff to fill a daily form covering meals,

medication, health status, mood, and activities. These entries are processed using Natural Language Processing (NLP) to generate a one-word sentiment summary (“Positive” or “Negative”), which is automatically shared with guardians as a daily reminder. Families can log in to view detailed reports and, where available, listen to optioTo further enhance transparency and resident nal staff audio recordings of daily observations. participation, the platform also includes a Resident Dashboard. This feature allows residents themselves to record short voice notes, which are transcribed and analysed for sentiment. Caregivers and families can then view transcripts and sentiment summaries, helping surface emotional wellbeing signals that may not appear in routine staff reporting. Unlike existing platforms that focus mainly on administrative reporting, ElderCare Connect introduces proactive emotional engagement through its unique “one-word daily sentiment update,” supported by optional staff and resident voice-based insights. Developed using the MERN stack, the system combines structured reporting, sentiment analysis, and secure dashboards to promote accountability, empathy, and dignity in eldercare.

2313. TALEEM

Project Advisor	MS. SAHER ZIA
Status	In Process of Completion

Taleem is a mobile learning application designed for children aged 3–8 years with primary focus on Urdu language acquisition and secondary support for English fundamentals. It integrates below given modules modules: Haruf-e-Tahaji (Urdu alphabets) Urdu Ginti (Numbers 1–100) Imla (dictation with handwriting recognition) Vocabulary Builder (thematic words) English Basics (alphabets and numbers) Story Builder (creative narratives)

2314. AI-DRIVEN SMART TOKEN SYSTEM WITH PREDICTIVE QUEUE MANAGEMENT AND PUBLIC API INTEGRATION

Project Advisor	MS. SARAH JAVAID
Status	In Process of Completion

Service industries like banks, hospitals, and government ofices are plagued by inefficient queue management, leading to long, unproductive waiting times for customers and operational inefficiencies for providers. This project proposes an A4-Driven Smart Token System to evolutionize this process. The system leverages machine learning to predict waiting times accurately, integrates real-time customer location tracking to dynamically manage queue order and employs robust no-show handling to minimize wasted service slots. Accessible via a public API and a mobile application, t provides real-time notifications and a comprehensive admin dashboard for analytics. The expected outcome is a significant reduction in waiting times and operational costs, culminating in a scalable, industry-agnostic software solution that enhances both customer experience and service provider efficiency.

2315. MEDIMATE: YOUR SMART HEALTH & MEDICATION COMPANION

Project Advisor	MS. SARAH JAVAID
Status	In Process of Completion

MediMate is a smart health and medication companion designed to improve medication adherence and patient care. It combines intelligent reminders, guardian monitoring, and doctor integration into a single mobile application. The app provides pill-image reminders, dosage tracking, and adherence logs while enabling guardians to monitor their loved ones in real time. Doctors can upload digital prescriptions directly, view adherence reports, and adjust treatment plans remotely. This integration ensures that prescribed medications are followed correctly, improving patient health outcomes. MediMate is targeted at elderly patients with chronic conditions, families who monitor their loved ones remotely, and doctors seeking better visibility into patient compliance.

2316. WHOLPAL: A GROUP BUYING & RESELLING E-COMMERCE PLATFORM FOR SMALL RETAILERS

Project Advisor	MS. SIDRA NOUREEN
Status	In Process of Completion

WholPal is a web-based platform designed to empower small shopkeepers in Pakistan by enabling collaborative group buying and direct reselling to consumers (B2P). The system addresses issues such as high wholesale requirements, dependency on middlemen, and unoptimized logistics. By integrating AI, the platform minimizes delivery costs through central hub selection, ensuring efficient and cost-effective order distribution. The solution leverages MERN technology stack and introduces features such as group order auto-locking, warehouse storage, order tracking, and real-time notifications. This project aims to modernize traditional wholesale trade, boost small retailers' profitability, and provide a scalable commerce solution.

2317. EASYCAR: SMART OBD-II BASED AUTOMATIVE SERVICE PLATFORM

Project Advisor	MS. USHNA KHALIL
Status	In Process of Completion

EasyCar is an AI-powered platform that connects to vehicles via OBD-II to provide real-time diagnostics, predictive fault detection, and smart car management. It combines ML, NLP, and data analytics through a mobile app and MERN-based website for seamless, intelligent vehicle care.

2318. QUICKMART

Project Advisor	MR. HAROON ABDUL WAHEED
Status	In Process of Completion

Quickmart: An AI-Powered E-Commerce Application is a mobile shopping platform aimed at making online shopping more smart and personalized. The main idea behind this project is to use artificial intelligence for facial recognition, allowing the app to identify a user's age and gender when it opens. Using this information, the system will display product suggestions, offers, and advertisements that match the user's interests and preferences. The app will let users browse, buy, and review products easily, while vendors can manage their stores and track performance. Extra features like discount spin wheel, shop ratings, and featured 5-star sellers will make the shopping experience more engaging. Quickmart will be developed using React Native, Node.js, MongoDB, and

Python with OpenCV for the AI module. This project aims to bring innovation to Pakistan's e-commerce market by offering a more intelligent and user-focused mobile shopping experience.

F25-BSDS

2319. OPEN SOURCE DATA GATHERING (OSDG)

Project Advisor	MR. FARAZ ALI
Status	In Process of Completion

This project proposes the development of an Open Source Data Gathering (OSDG) framework for smart surveillance, data analysis, and visualization using publicly available data. The system will collect and organize information from social media platforms, public records, business registries, government databases, and news sources. The framework integrates Natural Language Processing (NLP), sentiment analysis, entity recognition, network visualization, and geo-tagging APIs to analyze and structure data. It will provide a real-time dashboard that generates automated reports, alerts, and interactive maps for researchers, organizations, and decision-makers. The need for such a system arises from:

- Sovereign control over intelligence tools.
- Rising costs of commercial OSDG solutions.
- Increasing complexity of online data sources.
- Integration of AI in modern data analysis.
- Need for rapid response to emerging online developments.

This OSDG project ensures compliance with GDPR, data privacy laws, and ethical data collection guidelines, making it a cost-effective and scalable solution.

2320. VOIGERAI

Project Advisor	MR. FARAZ ALI
Status	In Process of Completion

VoigerAI is an AI-powered travel planning system designed to help users generate realistic and budget-aware tour plans. Most travelers in Pakistan face difficulties managing travel budgets and identifying suitable accommodation, food, and tourist attractions. Existing tools provide generic results without considering user budgets, lifestyles, or city-specific details. This project aims to build a Retrieval-Augmented Generation (RAG)-based system that integrates data from branded APIs such as Google Places, Booking.com, Skyscanner, and Foursquare with local data sources like OpenStreetMap and tourism websites. Focusing on Pakistan's key travel regions including Lahore, Karachi, Islamabad, Rawalpindi, Faisalabad, and the Northern Areas, VoigerAI will generate accurate, location-specific recommendations for accommodation, food, and sightseeing options. The system aims to improve trip planning efficiency and enhance the travel experience for users by delivering smart, personalized, and cost-effective travel packages.

2321. GAP GUIDE: AI JOB FIT AND SKILL GAP ASSISTANT

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

Gap Guide analyzes a resume, compares it to target roles via O*NET/ESCO, and outputs prioritized skill gaps, an upskilling plan, ATS-safe edits, and curated roles, optimized for explainability, privacy, and speed.

2322. AUTOMARKET: AI-POWERED E-COMMERCE MARKETPLACE

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

E-commerce has empowered small entrepreneurs, yet creating professional, trustworthy online stores remains a challenge. Sellers often spend time and money hiring photographers and content writers to make listings appealing and accurate, while buyers struggle with fake reviews and inconsistent product information. AutoMarket is an AI-powered multi-vendor marketplace that solves these challenges through automation and trust-building tools. The platform introduces tier-based AI image enhancement, voice-to-text GPT-style product description generation, auto-tagging and category prediction, verified reviews, fraud detection, and a messaging system between buyers and sellers. Its three-tier image enhancement system ensures scalability and accessibility for all sellers:

- Free Tier: Basic image enhancement using deep learning models for clarity and lighting.
- Premium Tier: Studio-quality photo transformation using Gemini Nano (Banana AI) for professional presentation.
- Elite Tier: Studio-quality photo + AI-generated 5–10 second product video using Veo 3 or Sora 2 for immersive product previews.

The platform integrates these capabilities through microservices architecture, ensuring modularity, scalability, and real-world readiness.

2323. INTELLIHIRE: SMART RECRUITER (AI-DRIVEN RESUME MATCHER & INTERVIEW SCHEDULER)

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

The recruitment process in most organizations, even big tech companies, is still heavily reliant on manual resume screening and keyword based applicant tracking systems, which are time consuming, error prone, and often overlook qualified candidates. This inefficiency creates delays, increases hiring costs, and introduces bias into decision-making. IntelliHire addresses this problem by providing an AI powered recruitment platform that automates candidate shortlisting, pre-screening, and scheduling. The expected results are a functional web application that reduces recruiter workload, improves candidate-job fit precision, automates pre-screening and streamlines interview scheduling. By integrating these capabilities, IntelliHire aims to significantly enhance efficiency, fairness, and accuracy in the hiring process. An integrated pre-screening module creates multiple-choice evaluates answers automatically, and provides detailed scoring. Finally, a scheduling service coordinates interview availability with calendar and email integration.

2324. HIRE: HOLISTIC INTERVIEW AND RESUME EVALUATION

Project Advisor	MR. UMAR RANA
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Status	In Process of Completion
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HIRE (Holistic Interview and Resume Evaluation) is an AIagent-based SaaS platform designed to simplify tech hiring for small-to-medium enterprises (SMEs), enabling seamless matching for full-time roles, short contracts, or freelance gigs with global, remote talent. By leveraging machine learning and autonomous agents, HIRE reduces hiring time by up to 80%, minimizes bias, and delivers precise, fair recommendationsempowering startups to build teams without a full HR setup.

2325. FARMVISION

Project Advisor	MR. UMAR RANA
Status	In Process of Completion

Agriculture is vital for the economy and food security of many developing countries, yet crop yields are severely threatened by plant leaf diseases. These diseases often go undetected in rural areas due to limited access to experts, costly diagnostic tools, and reliance on subjective manual inspection. Crops such as tomato, cauliflower, potato, and cucumber are particularly vulnerable, and if left untreated, leaf infections can rapidly spread and cause major losses. To address this challenge, the project proposes a CNN-based multi-crop leaf disease detection system. Unlike traditional methods or single-crop models, the system can classify diseases across multiple crops using a dataset of healthy and diseased leaf images. The trained model is integrated into a web application, enabling farmers to upload leaf images, receive instant predictions with confidence scores, and access treatment guidance. This approach provides a low-cost, automated, and practical solution to support early disease detection and improve agricultural productivity.

2326. AI-POWERED AUTOMATED SALES AND CUSTOMER SUPPORT PLATFORM

Project Advisor	MS. SUMRA FAYYAZ
Status	In Process of Completion

A cloud-based AI platform that automates sales calls and customer support, boosting conversions, speeding resolutions, and cutting costs

2327. BIG DATA ANALYTICS IN HEALTHCARE: CHRONIC DISEASE MANAGEMENT

Project Advisor	MS. SUMRA FAYYAZ
Status	In Process of Completion

This project makes use of big data analytics and machine learning algorithms to forecast the probability of chronic diseases: Diabetes, Breast Cancer, Heart Disease, and Kidney Disease. Using open-source data sets and Python-based libraries, we shall create predictive models with an accuracy level of at least 80%. A web application will be created so that users can provide basic medical details and receive instant forecasts. Secondly, deep learning will be applied for Heart Disease detection using chest X-ray images. This system encourages proactive healthcare management, informs public health decisions, and helps in minimizing medical expenses by performing early diagnosis and awareness.

2328. MULTIMODAL AI FOR EARLY DETECTION AND MONITORING OF EYE DISEASES IN SOUTH ASIAN POPULATIONS

Project Advisor	MS. SUMRA FAYYAZ
Status	In Process of Completion

Eye diseases such as diabetic retinopathy, glaucoma, and cataracts are leading causes of preventable blindness in South Asia, where limited access to specialized healthcare and late diagnosis worsen outcomes. This project proposes a multimodal AI system that integrates fundus imaging, optical coherence tomography (OCT), and patient health data (such as blood sugar levels and age) for early detection and continuous monitoring of eye diseases in South Asian populations.

2329. SAHICHECK: AI-POWERED FAKE NEWS & FRAUD DETECTION

Project Advisor	MS. SUMRA FAYYAZ
Status	In Process of Completion

SahiCheck is an AI-based mobile app that detects fake news, phishing, and online frauds. It uses Machine Learning and NLP to verify information in real time and ensures user privacy through encrypted communication. The app helps users stay safe online by identifying false or misleading content quickly and accurately.

F25-BSAI

2330. CRAFTAI: SMART UI GENERATOR FOR APPS & WEB

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

CraftAI – Smart UI Generator for Apps & Web aims to address the challenges of time-consuming and repetitive UI/UX design processes. Traditional UI creation requires significant manual effort in translating client requirements, maintaining consistency and avoiding errors especially when non-technical clients are involved. Our project leverages Natural Language Processing (NLP) and Large Language Models (LLMs) to generate responsive, multi-page UI designs directly from text prompts or hand-drawn sketches. The generated designs can be moved and edited in Figma. By bridging the gap between non-technical users and technical designers, CraftAI reduces design time by up to 80% which ensures consistency across interfaces and enables rapid iterations. The expected outcome is a deployed web application that empowers startups, developers and product teams to move from concept to working UI seamlessly.

2331. STREETFRESH: SMARTER WAY TO SHOP LOCAL COMMERCE

Project Advisor	MR. JAWAD HASSAN
Status	In Process of Completion

StreetFresh is a mobile marketplace application designed to formalize and streamline the informal street vendor economy. The project aims to create a trustworthy and efficient digital ecosystem by connecting local vendors with nearby customers in real-time. The system addresses key challenges of vendor discovery, price transparency, and quality assurance by leveraging modern technologies. Core features include AI-powered freshness scoring for produce by applying computer vision with a custom-built Convolutional Neural Network (CNN), real-time vendor tracking via geolocation, a fair digital bargaining system, and NLP-driven voice agent in Urdu and English to assist semi-literate users. The final product will be a scalable, cloud-based platform that empowers vendors to digitize their operations and grow their business while providing a convenient and reliable shopping experience for customers.

2332. EDUBOT: THE WEB-BASED AI TEACHER AVATAR AND LEARNING ASSISTANT

Project Advisor	MR. SYED ATIR RAZA SHIRAZI
Status	In Process of Completion

EduBOT is a cost-efficient, modular web-based platform featuring a 3D AI teacher avatar that provides personalized learning support. It addresses the need for accessible, interactive education tools by enabling real-time question answering with diagrams/examples, lecture summarization, and assignment solving. The modular architecture supports future integrations, such as Microsoft Teams, for notifications or collaboration. The project leverages knowledge in software engineering, AI, and web development, delivering a browser-based system that enhances student engagement and academic support.

2333. MEDICO+: AI ASSISTANT FOR MEDICATION ADHERENCE AND HEALTH RECORDS

Project Advisor	MR. SYED ATIR RAZA SHIRAZI
Status	In Process of Completion

Medico+ NeuroCare is a privacy-focused AI healthcare platform that integrates patient medical records with advanced brain health analysis. It combines MRI based brain tumor segmentation and EEG-based seizure/emotion analysis into a single system, addressing the challenge of fragmented diagnostic workflows. The platform also supports medication adherence through reminders and predictive analytics. By adopting federated learning, hospitals can collaboratively train models without exposing sensitive patient data. The system outputs secure, AI-generated PDF reports for doctors and patients. This project leverages AI, medical imaging, EEG signal processing, and privacy-aware system design to deliver a unified, real-world healthcare solution for Pakistan's hospitals.

2334. STITCHMATE: AI MEETS TAILORING-VISUALIZE, CUSTOMIZE, DELIVER

Project Advisor	MR. SYED ATIR RAZA SHIRAZI
Status	In Process of Completion

StitchMate is an AI-powered tailoring platform designed to transform unstitched fabrics into personalized, stitch-ready outfits. The system integrates generative AI models and LLMs to create measurement-aware stitched previews, offers accessory overlay

customization linked with real vendor catalogs, and provides a virtual try-on experience for users. It further incorporates a tailor marketplace with bidding logic, enabling customers to connect with multiple tailors and choose the best offer. Through logistics integration, StitchMate ensures seamless pickup and delivery of fabrics and finished outfits. Tailored specifically for South Asian clothing styles, the platform bridges the gap between digital design, real-world tailoring, and delivery offering users a complete end-to-end stitching ecosystem.

2335. FINDIFY: SMART PRODUCT FINDER USING AI

Project Advisor	MR. UMAR RANA
Status	In Process of Completion

Findify is an AI-powered mobile shopping assistant that enables users to discover products using multimodal search—via images, text, or voice input. Unlike conventional keyword-based search systems, Findify employs embedding-based semantic search, where both user queries and product data are converted into vector embeddings using models such as CLIP or BLIP2. These embeddings are stored in a vector database (Weaviate) and retrieved through similarity matching, enabling cross-platform product discovery and real-time comparison. The system integrates multiple functionalities, including cross-store price aggregation, personalized ranking through user-preference embeddings, and price-drop alerts, ensuring that results are relevant, up-to-date, and tailored to each user. The mobile app, developed with Flutter and powered by a FastAPI backend, supports seamless checkout redirection to seller websites without storing sensitive payment information. The project demonstrates the application of multimodal artificial intelligence, vector similarity search, and mobile development to solve the problem of inaccurate and fragmented product search in online shopping.

2336. RATINAWISE: SMART OCT DIAGNOSIS & SPECIALIST PORTAL

Project Advisor	MR. UMAR RANA
Status	In Process of Completion

RetinaWise is an advanced AI-powered web platform that seamlessly integrates deep learning diagnostics with teleophthalmology, aiming to enhance early detection, accuracy, and accessibility of retinal care. The platform leverages state-of-the-art Convolutional Neural Networks (CNNs) such as ResNet-50 and DenseNet-121 to analyze Optical Coherence Tomography (OCT) scans — a highly detailed, non-invasive retinal imaging technique widely used in modern ophthalmology. By processing these scans through robust neural networks, RetinaWise can efficiently identify and classify sight-threatening retinal diseases, including Diabetic Macular Edema (DME), Choroidal Neovascularization (CNV), and Drusen, which are critical indicators of Age-Related Macular Degeneration (AMD). The platform offers a dual-interface system: one for patients and another for ophthalmologists. Patients can upload OCT scans, obtain instant AI-generated diagnostic results, and access comprehensive visual explanations through Grad-CAM heatmaps, which highlight the regions affected by disease to promote interpretability and trust. Additionally, the platform features a specialist locator, built upon the Google Maps API, enabling patients to find and connect with nearby ophthalmologists or clinics for further consultation. Unlike conventional clinic-based diagnostic systems, which are often limited by location, resources, and specialist availability, RetinaWise adopts a patient-centric approach that emphasizes accessibility,

transparency, and efficiency. It ensures clinical reliability and data security through HIPAA-compliant encryption, multi-layer authentication, and cloud-based storage powered by Firebase and Supabase. These technologies collectively safeguard sensitive medical data while supporting scalability and real-time collaboration between patients and healthcare providers. Ultimately, RetinaWise serves as a bridge between artificial intelligence and accessible healthcare, uniting AI diagnostics, medical data management, and teleconsultation within a single, intuitive, and secure ecosystem. By democratizing access to expert-level retinal diagnostics, RetinaWise holds the potential to transform early intervention practices, reduce preventable blindness, and empower both patients and clinicians through AI-driven ophthalmic innovation.

2337. DETECTRA AI

Project Advisor	MR. USMAN AAMER
Status	In Process of Completion

Detectra AI is a unified web application designed for multimodal video analysis, providing an end-to-end solution for extracting synchronized insights from raw video data. Unlike existing systems that rely on third-party APIs, Detectra AI integrates object detection, logo recognition, motion/activity recognition, and audio transcription (including environmental sounds and speech) into a single platform. Using a transformer-based fusion engine, the system synchronizes outputs from multiple modalities into a unified, timeline-based dashboard, enabling deeper contextual understanding and real-time analysis. This project addresses key challenges in current video analysis tools, including limitations in contextual integration, privacy concerns, and scalability issues associated with API dependencies. By offering a self-contained, API-free framework, Detectra AI ensures enhanced privacy, customization, and scalability, making it ideal for applications in surveillance, sports analytics, media monitoring, and other domains. The project covers a broad range of technical knowledge, including deep learning (CNNs, Transformers), computer vision (YOLO, DETR, Vision Transformers), natural language processing (speech-to-text), and web development (Flask, Next.js), culminating in an interactive, timeline-based dashboard that delivers actionable insights across various industries.