Overview Output of all GITHUB repos

It contains most of the projects ,codes, i have done

Web Development

1.Herbiverse -Virtual Herbal Garden(Team)

- Developed an interactive VR-based herbal garden using Unity and React for immersive plant exploration
- MERN,Blender,Unity,APIs,Webscraping
- My Contribution:
- Developed a stack overflow based Forum where users can communicate with each other.
- Created Medicinal Plant Database, formatting the details,Derived a Disease to medicinal cure relation for optimizing search engine results.
- Additionally, made project plans for faster collaboration.
- More Details about project are available in https://devpost.com/software/herbiverse

2.Langex-Language Exchange Platform (Team)

- Hacktober fest panel winner held by **CBIT** open source community
- Developed a platform for connecting language learners using React,Express,Firebase,socket.io,Apis and more
- Connection through live video calls .
- Mini Games on language to encourage fun-learning
- Customized queue system, progress tracker ,badge system
- My Contribution:
- Developed Most of the Frontend ,Complete Backend in Firebase
- https://github.com/kaushiksai711/HTF24-Team-108

3.Paytm_Clone:(AICTE Internship)

- Developed a digital payment wallet using the MERN, Tailwind etc
- Designed a user-friendly dashboard with transaction graphs for expense tracking and bank connectivity via the Plaid API.
- Implemented OTP-based authentication(Nodemailer)
- Blockchain-based secure transactions, and CSV export for transaction history.
- Custom blockchain development.
- https://github.com/kaushiksai711/paytmclone1

4.Artistic Treasures

- Designed an E-commerce Website for sharing arts and crafts using MERN
- Key features include :
- Buy/Sell Arts and Crafts,User Dashboard,Order History,Chat Forum
- https://www.linkedin.com/posts/kaushik-sai-mamidi-663b412a0_artistictreasures-ecommerce-artcommunity-activity-7219976251363450880-OBuP?utm_source=share&utm_medium=member_desktop&rcm=ACoAAEjIkmsBQpSltHSYLX7NHmCr8bxVQS3PH-w
- https://github.com/kaushiksai711/Arts.github.io

5.MiniGames

- These were the start of my dev journey ,wanted to mention them
- HangMan:contains a basic hangman game with terminal as interface.
- SnakeGame: contains basic snake game.
- Bank: (Made using java OOP) to imitate banking systems.
- https://github.com/kaushiksai711/Hangman
- https://github.com/kaushiksai711/Snakegame
- https://github.com/kaushiksai711/Bank

Artificial Intelligence ,Machine Learning and Data Science

1.Pdf Q&A System

Developed a **FastAPI-based backend system** that enables **PDF processing and real-time Q&A** using **Google Generative AI (Gemini)** , Cloud storage, WebSocket

- Users upload PDFs, which are processed to extract text and store metadata in PostgreSQL.
- PDFs are stored in Google Cloud Storage, and the Google Generative AI (Gemini) model provides real-time answers based on document content.
- Clients connect to a WebSocket endpoint to ask questions, receive AI-generated answers, and maintain contextual session history.
- Limits user requests (e.g., one every 5 seconds) to prevent system abuse and ensure smooth performance.
- PostgreSQL stores document metadata, extracted text, and public PDF URLs for efficient retrieval and processing.
- Handles invalid file uploads, database errors, and WebSocket connection issues while logging all key events for monitoring.

- **Video Demo and project code** explanation :
  https://drive.google.com/drive/folders/1LIGer98xQ5FGVEPlpdB1Rzus4zmRcwDn

2.Automated Information Retrieval System

- User can ask any relevant query , data is continuously webscraped until LLM determines the retrieved information is sufficient to answer the query

  Currently the project can:
- Dataset Creation: Datasets for finetuning LLMs can be created through this system

  Future Scope:
- Imitate **Perplexity.ai** in retrieving and presenting sources to user with relevant answers
- https://colab.research.google.com/drive/1E_jBxnDvGvjoWpfoVH_d2Qf20FHVdHx6?usp=sharing

3.Pdf Visualizer -

- A private pdf Visualizer where user can chat with their pdfs made using React, tailwind ,Stored in user system,Flask for backend

  Currently This project can:

- Handle Pdfs with content over 150 pages.
- Make a unique 3d knowledge graph created for each pdf based on clustering and TFIDF
- A chat interface with locally installed model for added privacy
- A RAG visualizer(here the chunks are plotted in 3d space and visualized)

  Under development
- Handle multiple documents at once with low latency and desktop app creation
- https://github.com/kaushiksai711/pdf_visualizer
- Outputs are kept in separate tab

4.LegalMind-under development

- Provide Legal assistance to users (general citizens) to be made using next.js, flask
  Currently:
- Can summarize legal documents , identify key personnel involved and state laws violated
  Future:

- A complete website deployed to reach end users
- While i cant share code as it is a team decision i would like to share the output
- Please view **LegalMind_output tab**

5.Computer Vision

5.1 Landmark Detection

- Identify Landmarks from images under different environmental conditions, viewpoint
- Utilized VGG19 CNN to classify landmarks and finetuned based on google landmarks dataset
- https://github.com/kaushiksai711/AI-ML-project-reports

5.2 Vision Transformer-internship_private

- Trained a custom vision transformer on CIFAR-10,100 datasets
- Compared with CNNs for performance
- Achieved 88% accuracy

6.AgroPlanner

- A farming assistant made for seed to harvest assistance and financial planning

  Current
- Crop yield prediction is done with random forest regressor achieving 0.902 r2 value.
- The dataset is created by our team from authenticated sources(NASA ,ICRISAT).
- The processed dataset contains various parameters covering soil, weather,location distributed across 26 years making 53000+ records.
  Future Scope:
- Soil Scanner and voice enabled assistance
- Seed to Harvest assistance according to user locality
- As this is a team project , i can show current output only
- Please view the **agroplanner output tab**

7.Chatbot Prakruti

- This was the first project on NLP .
- A Chatbot which converses with user,evaluates user body type and recommends lifestyle changes,personality estimation,diet recommendations
- Implemented using tkinter
- https://github.com/kaushiksai711/Aichatbot

Club_work

1.Software_Rover:(Chaitanya Astra club)

- This project contains the software components for a rover, including system initialization, telemetry, movement, terrain mapping, object detection, path planning, and more
- https://github.com/kaushiksai711/Software_Rover

2.Software_Drone:(Chaitanya Astra club)

- This project contains basic structure of drone software implementation.
- https://github.com/kaushiksai711/Software_Drone