



**REVA**  
UNIVERSITY

Bengaluru, India



Established as per the section 2(f) of the UGC Act, 1956

Approved by AICTE, COA and BCI, New Delhi

# Second International Conference on Advances in Computing & Information Technology (IACIT - 2020)

29<sup>th</sup> and 30<sup>th</sup> April 2020

Organised by  
School of Computing and  
Information Technology

Co-Sponsored by





BANGALORE • INDIA

# PROCEEDINGS OF SECOND INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING AND INFORMATION TECHNOLOGY (IACIT-2020)

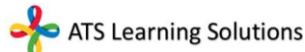
**29<sup>th</sup> & 30<sup>th</sup> April 2020**

**Organized by**  
**School of Computing and Information Technology**

**Virtual Conference**

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**SECOND INTERNATIONAL CONFERENCE ON  
ADVANCES IN COMPUTING & INFORMATION  
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**(IACIT-2020)**

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## Message from the Chancellor



The successful outcome of three national conferences and one international conference held at REVA University generated an awe-inspiring response from our stakeholders, delegates, keynote speakers, and visitors. I am happy to understand that as an extension to the conferences held before, the School of Computing and Information Technology is hosting a two-day International Conference with a focus on "Advances in Computing and Information Technology" [IACIT-2020]. The conference aims to exchange ideas of researchers, developers, industry leaders and academicians on their latest innovations and findings, and to build collaboration for cutting-edge research and product development. The conference will enable us to bridge the gap between Industry and Academia.

I hope the conference will be an informative and pleasurable experience and all of you have to take this opportunity to establish international research collaboration. I wish the Conference all success and congratulate the team of School of Computing and Information Technology for their endeavor!

### **Dr. P. Shyama Raju**

Chancellor,  
REVA University,  
Bengaluru, India.

## Message from the Vice-Chancellor (I/C)



I am delighted to note that the School of Computing and Information Technology is organizing a two day International Conference entitled "Advances in Computing and Information Technology" [IACIT-2020]. Certainly, this type of conference not only brings all the researchers, students at one platform, but it also inculcates the research culture among the entire fraternity of Education in the country, thereby, contributing to the development of nation.

I hope that this conference would certainly induce innovative ideas among the participants paving way for new inventions and technologies in the Computing and Information Technology. I congratulate the Director, staff and students of School of Computing and Information Technology for initiating the conduction of such a conference.

I wish the conference a grand success.

**Dr. Surendra Rao Shankapal**

Vice-Chancellor (I/C),  
REVA University,  
Bengaluru, India.

## Message from the Registrar



The science and engineering research conducted in academic institutions, industry, R&D Laboratories and elsewhere plays a critical role in raising our standard of living, creating jobs, improving health and providing for national security and development. I am extremely happy to note that School of Computing and Information Technology, REVA University is organizing a two day International Conference entitled "Advances in Computing and Information Technology" [IACIT-2020].

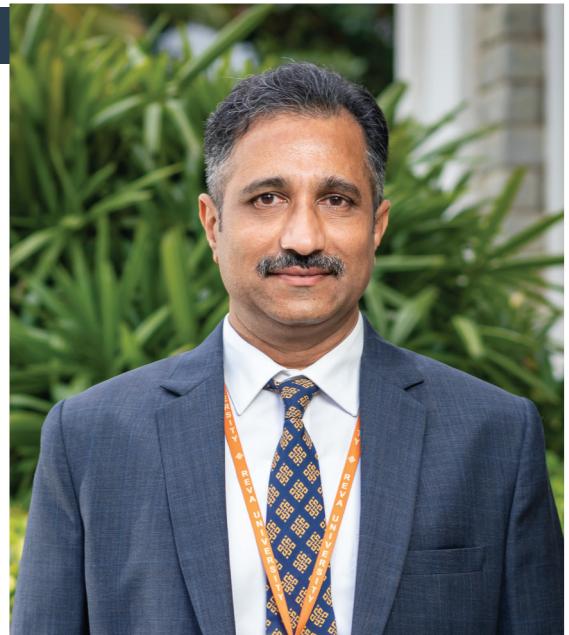
I am sure that the conference of this type will inculcate the much needed research culture among the students and teachers and trigger interactions among researchers to exchange the ideas of recent advances in the areas of Computing and Information Technology which will have the way for the national development.

I wish the conference a grand success.

### **Dr. M. Dhanamajya**

Registrar,  
REVA University,  
Bengaluru, India.

## Message from the Director, R&D



Research at REVA University is culture and to promote this, the university offers Ph.D. programs in Science & Technology, Arts & Humanities, Commerce & Management, performing arts, Legal studies, and Architecture. Dedicated faculty members and research scholars are undertaking research in cutting edge interdisciplinary research. Research circles mentored by senior researchers provide guidance to young members and instill research culture in the schools. The university aspires to become one of the universities known for applied research and hence encourages dissemination of research outcomes through forums such as this one being organized by the school of Computing and IT.

I congratulate the school for organizing the international conference "Advances in Computing and Information Technology" for the second successive year. I convey my best wishes to the organizers and the participants and hope that the conference will open up new avenues to tackle societal issues.

### **Dr. B. P. Divakar**

Director, R&D,  
REVA University,  
Bengaluru, India.

## Message from the Director, School of C & IT



Curricula of both undergraduate and postgraduate programs have been designed through a collaboration of alumni, academic, research and industry experts in order to bridge the gap between industry and academia as well as to inculcate innovation and leadership qualities. This makes the program highly practical and industry oriented. The B. Tech. program aims to create quality human resources to play leading roles in the contemporary, competitive industrial and corporate world. The Masters Degrees focus on quality research and design in the core and application areas of computing to foster a sustainable world and to enhance the global quality of life by adopting enhanced design techniques and applications. This thought is reflected in the various courses offered in the masters' programs. Research degree programs are aimed at design and development of solutions to contemporary problems in computer and engineering technologies oriented towards humanity development.

Welcome to School of Computing and Information Technology at REVA University for better learning and becoming future leaders for the socio-economic growth of nation and the world

### **Dr. Sunilkumar S. Manvi**

Director,  
School of Computing and Information Technology,  
REVA University,  
Bengaluru, India.

## Keynote 1

### Topic: Industry 4.0 – AI, Robotics and Automation

**Speaker** Dr. Prahlad Vadakkepat @ National University Singapore

**Date** 29 April 2020

**Time** 2:00 pm to 2.30 pm

**Venue** IACIT Virtual Conference

**Abstract:** Industry 4.0 – AI, Robotics and Automation The fourth industrial revolution, namely Industry 4.0, is a buzz word lately. A number of industries have been in existence for a period of time. They have established R&D processes, plant operations, supply chains and technologies. Now the industries need to change and improve the sets of processes to remain competitive. Industry 4.0 is a broad term involving modern technologies and processes that can integrate, replace or improve legacy technologies and processes leading to improved productivity. With improvements in productivity and efficiency, the carbon footprint will reduce which in turn will contribute towards sustainability. Internet of Things, Artificial Intelligence, Robotics and Automation are transforming industries to cyber physical systems. With historical data and insights along preventive maintenance, the entire production line can be visualized and decisions can be taken autonomously. When industries embrace the Industry 4.0 transformation, skill sets in AI, IoT, Robotics and Automation will dominate, while certain typical job profiles ceasing to exist in the next 5 or 7 years. Increased awareness about Industry 4.0 and sustainability is essential and school curricula need changes to prepare graduates who are future ready. It is hoped that AI, IoT, Robotics and Automation will contribute towards paving the way for a better tomorrow for all. This talk will focus on Industry 4.0 related technologies and the challenges faced by Industry and ahead. That in turn can highlight the need for changes academia and research to prepare for a unique tomorrow.



**Speaker's Profile:** **Dr. Prahlad VADAKKEPAT**, an Associate Professor at the National University of Singapore is the founder secretary of the Federation of International Robot-soccer Association and was its General Secretary during 2000-16. Vadakkepat's work in FIRA had led to several start-ups in robotics and embedded systems. He had chaired the Futurescape 2025 panel on "I, Robot" by A\*STAR Singapore. He is a nominated member of the Loka Kerala Sabha (World Kerala Assembly), Govt. of Kerala (2018-22). He is one of the resource persons in the Igniting Minds movement by Vijyana Bharathi India (VIBHA) which is a programme enabling students to shed conventions and think out of the box.

DR. VADAKKEPAT served as the Editor-In-Chief for the Springer Reference Book of Humanoid Robotics. He is an associate editor of the International Journal of Humanoid Robotics. His Humanoid robots and robot soccer teams have consistently won several international prizes: First prize and overall championship in Humanoid robot soccer at the FIRA Robot World Cup (Germany 2006, Singapore 2005 and Austria 2003), First Prize (open category) in Singapore Robotic Games (2004) and Second prize in FIRA 2004.

He is a Senior Member of IEEE (USA, since 2005) and a life member of the IEEE HKN honour society. He was the Secretary to the IEEE Singapore Section in 2005. He had served as Technical Activity Coordinator to the IEEE Region 10 (Asia-Pacific) during 2001-2002. He is a Fellow of the Institute of Electronics and Telecommunications Engineers (IETE), India. He was a member of the National Committee on Robotics, Confederation of Indian Industry (2009-2011). He is actively involved in various technical forums including conferences, symposia and robotic competitions. He has been featured in prominent newspapers & TV shows in India, Singapore, USA, Korea, Japan, Spain, Kuwait, Dubai, Qatar, Bahrain, France & China. His name is included in the Marquis Who is Who in the World since 2006.

Dr. Prahlad Vadakkepat received the B.Eng. degree in Electrical Engineering from Calicut University, Kerala in 1986, and the M.Tech. and Ph.D. degrees from the Indian Institute of Technology Madras in 1989 and 1996, respectively. Since 1999, he is with the National University of Singapore. In 2017 August he became the master to PGP House, a NUS residential college, living with students extending pastoral care and mentoring. His research interests include Robotics, AI, big-data, humanoid robotics and frugal innovation. He is passionate in establishing inclusive leaderships.

## Keynote 2

**Topic: IOT-Concepts-- Performance Modelling and Applications --a Perspective View**

**Speaker** Dr. Shishu Varma @ IIIT Allahabad

**Date** 30-4-2020

**Time** 9.30am to 10am

**Venue** IACIT Virtual Conference

**Abstract:** Wireless sensor network (WSN) refers to a group of spatially dispersed and dedicated sensors for monitoring and recording the physical conditions of the environment and organizing the collected data at a central location. WSNs measure environmental conditions like temperature, sound, pollution levels, humidity, wind, and so on. These are similar to wireless ad hoc networks in the sense that they rely on wireless connectivity and spontaneous formation of networks so that sensor data can be transported wirelessly. WSNs are spatially distributed autonomous sensors to monitor physical or environmental conditions, such as temperature, pressure etc. The development of wireless sensor networks was motivated by military applications such as battlefield surveillance; today such networks are used in many industrial and consumer applications, such as industrial process monitoring and control, machine health monitoring, and so on.

The WSN is built of “nodes” – from a few to several hundreds or even thousands, where each node is connected to one (or sometimes several) sensors. Each such sensor network node has typically several parts: a radio transceiver with an internal antenna or connection to an external antenna, a microcontroller, an electronic circuit for interfacing with the sensors and an energy source, usually a battery or an embedded form of energy harvesting. A sensor node might vary in size from that of a shoebox down to the size of a grain of dust, although functioning “motes” of genuine microscopic dimensions have yet to be created. The cost of sensor nodes is similarly variable, ranging from a few to hundreds of dollars, depending on the complexity of the individual sensor nodes. Size and cost constraints on sensor nodes result in corresponding constraints on resources such as energy, memory, computational speed and communications bandwidth. The topology of the WSNs can vary from a simple star network to an advanced multi-hop wireless mesh network. The propagation technique between the hops of the network can be routing or flooding.



**Speaker's Profile:** **Dr. Shirshu Varma**, working as a Professor in Indian Institute of Information Technology- Allahabad (IIIT-Allahabad). He is also the Registrar (Acting) of IIIT-Allahabad. He has about 28years of experience of teaching and research. He has published excellent papers in international and national journals and conferences of repute and is the author of 04 book chapters. Supervised 07 PhD's and 04 are in progress in the area of wireless sensor network and distributed sensing. Dr Shirshu Varma has worked as a member of many national and international conferences of repute.

Dr Shirshu Varma visited RAS Moscow, Donseo UniversitySouth Korea, AIT ,Bangkok,Thailand for various academic purposes in the area of wireless sensor network. **He has been awarded Entrusted Visiting Professor from Dongseo University South Korea.** His area of work includes:- Wireless sensor networks- coverage & connectivity, Sensor deployment and localization, Wireless sensor statistical routing etc. WI-FI, WiMAX. He has also worked as a Member of the editorial board of various international journals. His areas of interest are intelligent sensor network, wireless sensor network-localization, geographical routing, optical wireless communication, and next generation wireless sensor networks. His group is basically focused on analysis of statistical routing, geographical routing in heterogeneous network, localization error etc in wireless sensor networks with the help of sensor motes using various simulation tools.

## **Keynote 3**

### **Topic: Neural Natural Language Generation**

**Speaker** Dr Yaji Sripada @ University of Aberdeen, Scotland

**Date** 30 April 2020

**Time** 2 pm to 2.30 pm

**Venue** IACIT Virtual Conference

**Abstract:** Natural Language Generation (NLG) is an AI (Artificial Intelligence) technology that translates structured data (e.g. spreadsheets) into plain English text. Because structured data arises in sports, engineering, finance, healthcare and politics, NLG technology is widely applicable in all these fields. In December 2019, BBC used NLG technology to quicken reporting election results for individual constituencies. Recent advances in deep learning are now increasingly applied to NLG and this talk explains a very commonly used approach to neural NLG.



**Speaker's Profile:** **Dr Yaji Sripada** is an Associate Professor of Computing Science at the University of Aberdeen, Scotland. Dr Sripada's research is at the intersection of data science, machine learning and natural language generation (NLG). He is one of the founders of Arria ([www.arria.com](http://www.arria.com)), a company specializing in NLG technology. He is an inventor on several US patents related to NLG technology. He is currently supervising PhD students on XAI (eXplainable AI), deep learning for sonar image processing with an aim to describing regions underwater, and deep learning for NLG.

## School of Computing & Information Technology

### Second International Conference on Advances in Computing & Information Technology (IACIT – 2020)

#### Day – 1: Paper Presentation Schedule

**Wednesday, 29<sup>th</sup>April 2020**

#### Data Mining & Artificial Learning – 1

Paper ID	Title & Authors
IACIT – 516	Comparative Analysis Of Multiple Classification Algorithms On Heart Disease Prediction Harshitha M , Sanju V
IACIT – 542	Enhanced Classification and DNA Security on large scale Dataset Rakshitha M, Ranjitha V, Samarpita Maitra, Sanjeevini Nasi, K Amuthabala
IACIT – 578	ECG Pre-processing and Clustering of Heart Rhythm Kruthani B R, Pruthviraj M A, Pavan S, Sumarani H P, Spoorthi Rakesh
IACIT – 592	Prediction Of Oral Cancer Using Data Mining Rachana C, Pooja Gorantla, Snehal Rathi, Lavanya J S, Manju More
IACIT – 598	Hybrid predictive model for Breast Cancer detection Bhavana.S, Charitha.S, Bhavya.V.V, C.Sonia, Aruna Kumara B
IACIT – 551	Locating Missing Persons Using Artificial Intelligence Mithilesh Kumar, Shikar Singh, Dipesh L, I.Harish Raju, S.Sasidhar Babu
IACIT – 625	Heart Disease Prediction Using Data Mining Shamanth DL, Sudhakar, Vikesh Reddy, Nishchay M, Sohara Banu

#### Machine Learning – 1

Paper ID	Title & Authors
IACIT – 517	An Approach To Animal Face Identification And Classification System Using CNN Rakesh T M, Vishwanath R Hulipalled
IACIT – 530	Evaluation Of K-Means And Cnn Architectures For Segmentation Of Brain Tumor Supriya S, Tejasri S Reddy, Tessy Dominic, Triveni S P, Thirumagal E
IACIT – 536	Brain Tumor Segmentation Using Machine Learning Rahul Kumar Jaiswal, Sagar Thapa, Akash Kumar Yadav, Aneev Amit, Manju More
IACIT – 544	Spam Detection Using Machine Learning Alok JP, Akarsh HJ, Ajay kumar, Abhishek Sanadi, Manju More
IACIT – 567	Localization Of Eyes Using Haar Cascade Classifier Aditya Kumar, Akshay Ravindran, Ananya Shank, Sagar K, Surendra Babu K. N

	IACIT – 541	Intelligent Accident Management System Rotini Raja, Sai Lakshmi P, Priyanaka N, Supreeth S
<b>Mobile Computing &amp; Cloud Computing – 1</b>		
Session 1-C  10:30 am To 11:30 am	Paper ID	Title & Authors
	IACIT – 641	Voice Activated Pet Feeder Using Cloud Ranjitha R.G, Sai Arpita Kustagi, Sai Sushma Patil, Priyanka, Asha K
	IACIT – 680	A Certificate Technique And Two Factor Authentication For Cloud Security Adaptation Tejaswini B, K Amuthabala
	IACIT – 531	A Smart Blind Stick Richard C Kunnath, Rosemin Vincent, Sangeetha Sharma, Shagufta Anjum Khan, Manjunatha PC
	IACIT – 564	Farming Quad Copter for Spraying Pesticides and Fertilizers Basavarajeshwari Kuppi, Bhavya Shree S, Bhoomika H G, Bhoomika T M, Chaithra M H
	IACIT – 579	Smart Waste Management Using IoT Rishav Kumar Thakur, Rahul, Abhishek Saurabh, Rahul Maddiriki, Dasari Bhulakshmi
	IACIT – 556	IOT Based Smart Agriculture In Polyhouse Vishal Kumar, Phulekar Krishna Sai, Vikas, Vineeth Kumar Reddy, Anitha K
	IACIT – 557	Voice Controlled Smart Switch Board Sahil Kumar Sondik, Saikat Mukherjee, Sailodhar Rabha, Abhishek Bisht, Dasari Bhulakshmi
	IACIT – 560	Voice Based Robotic Vehicle With Obstacle Avoidance Lokireddy Sai, Msumanth, Maram Venkata Nagasai Teja, Bavigadda Purushotham Naidu, Shalini Tiwari
<b>Digital Image Processing – 1</b>		
Session 1-D  10:30 am To 11:30 am	Paper ID	Title & Authors
	IACIT – 519	Sentimental Analysis On News Topic Using Live Twitter Feed AsifIqbal Sirmulla, Prabhakar M
	IACIT – 594	Fake Indian Currency Detection Using Image Processing Vishal Nandy, Prince Saji, Sridhar NS, Yashwanth Kumar MS, Mallikarjuna M
	IACIT – 577	Sentiment Analysis On Movie Reviews P. Trupthi, Pooja Jehan, Pandeti Madhura, Pooja Polampalli, Aruna Kumara B
	IACIT – 640	Gradient Descent Based Support Vector Machine Approach For Sentiment Classification Jayashree Jagdale, Emmanuel M
	IACIT – 820	Locating Theft mobile Using efficient Face recognition R Deepthi, Prathiba J, Harshini P, Praneetha DS, Prabhakar M.
	IACIT – 529	Sentimental Analysis For Movie Reviews Kumar Abhishek, Mayank Mehiral, M. S. Sathvik Murthy, Raghavendra Reddy
	IACIT – 532	15 Level Single Phase Multilevel Inverter Topology With Equal Area Criteria PWM Technique Venu Gopal B. T, Yashwanth Kumar N, E. G. Shivakumar
	IACIT – 619	Facial Recognition System Using Image Processing Ayyagari Sai Ashish, Bimbisara P, B G Akshith Kumar Redd, Darshan S H, Nimrita Koul
<b>Digital Image Processing - 2</b>		
Session 1-E	Paper ID	Title & Authors
	IACIT – 501	A Study On Data Protection And Privacy In Medical Healthcare Sarika C G, S N Chandrashekara

<b>10:30 am To 11:30 am</b>	IACIT – 508	A Survey On Early Diagnosis Of Alzheimer'S Disease Using Fmri Data And Neural Networks Abhijnashree, Chandana K, Rimsha Mariam, Shanker Mahadev, Karthik S A
	IACIT – 599	Classification And Extraction Of Brain Tumor Using Hybrid Algorithm Haripriya Sooryakumar, K V Poojana, Chaitra B
	IACIT – 684	Drowsiness Detection System Using Haar Classifiers Shubham Kumar Singh, Smit Soni, Sonu Suman, Soumyalatha Naveen
	IACIT – 657	Sentiment Analysis Ofproduct Reviews In Amazon Using Machine Learning Kamesh S, Poornima.M, Varshini J Nayaka, Vidya K, Ragavendra Nayaka P
	IACIT – 812	Traffic Stop Line Crossing Detection System Using Image Processing Akhil Kumar Reddy G, Akshay Patil, Anantraj Katti, Anirudh SS, Bhaskar Reddy
	IACIT – 563	Extracting Text From The Picture By Using OCR Technology Navneet Priya, Sheelavathy K V
	IACIT – 644	Text Recognition From Images Using Image Processing Technique Bindu Bhargava Reddy C, C Tejasundar Reddy, B Gopiamarnath Reddy, K Bharath Prakash Reddy, Priyadarshini R

### **Natural Language Processing & Embedded Systems**

<b>Session 2-A</b>  <b>12:00 Noon To 1:00 pm</b>	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT – 603	Chatbots Technologies And Applications: A Survey Shaziya Banu, Shantala Devi Patil
	IACIT – 629	Health Care Chatbot Assistant System Adarsh HJ, Akshay.A, Channa Keshava.V, Anju, Raghavendra Nayaka.P
	IACIT – 673	Kannada Kali Goutham Jason, Kenneth Jones, Kevin George Thomas, Harshith Sheshan, L A Lalitha
	IACIT – 545	Android Learning App Using Augmented Reality Ajay Dev K S, Ajay Jose, Aneez M M, Ahmed Abubaker Barahim, Meenakshi Sundaram.A
	IACIT – 588	Election Voting Using Sms Rahul Upadhyay, Raunak Singh Chadha, Priyanshu Tomer, Rahul Ranjan, Soharabanan AR
	IACIT – 686	Refit Reva Sankar Sreenath, R Devendranath Reddy, P Shiva Kishore Reddy, Rudraraju Saikarthik, Geetha B
	IACIT – 537	Vivify: Driver's Drowsiness Detection And Alarming System Prajwal Pandit, Prashant Vijay Gaikwad, Venkatesh Mane, Prakash Gautam, Sheelavathy K V
	IACIT – 549	Blood Bank Information Using Andriod Application Monisha J, Niriksha M B, Laxmi B Ranananavare

### **IoT & Wireless Sensor Networks - 1**

<b>Session 2-B</b>  <b>12:00 Noon To 1:00 pm</b>	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT – 518	Smart Fitness Trainer System Using Computer Vision Tejas Rao C, Mohammed Zainuddin, Syed Faraaz Ahmed, Shrishail M Patil, Priyadarshini R
	IACIT – 520	Survey On Energy Efficiency Mac Protocols In Wireless Sensor Network Padmajeetha B.G, Mallanagouda Patil
	IACIT – 527	Effective Scheduling And Queuing Strategy In Wmsns Using Enhanced Equivalent Capacity Model

	Ashok K Chikaraddi, Meena S, Suvarna G Kanakaradd
IACIT – 637	Rogue Wi-Fi Penetration Framework[Rwpf] Charan SaiKumar Chittanuru, Gopichand D, B. Hrushith, Raghavendra Reddy
IACIT – 679	Fuel Monitoring System for Vehicles Using IoT Technology Kartik R Navagire, Mohammed Usama Khaleel, Santosh Kumar S, Ravi Sasabal, Shiva Kumar R Naik
IACIT – 681	Q-Learning Novel Routing Algorithm in Wireless Sensor Networks Kundan Kumar Jha, M Mallikarjuna

## **Data Mining & Artificial Intelligence - 2**

Session 2-C  12:00 Noon To 1:00 pm	Paper ID	Title & Authors
	IACIT – 550	Client Side Secure Image Deduplication For Optimized Storage Shreya Karbhari, Sonia Tripathi, Sparsh Gusain, Tejeshwini M S, Priyanka Bharti
	IACIT – 769	Heart Disease Classification: A Feature Engineering Approach S Mirudula, Akram Pasha, Sathya Rupa M, Ritu Shenoy
	IACIT – 764	Machine Learning Based Sentiment Analysis of Distributed Customer Product Reviews data on Amazon Varsha V, Akram Pasha
	IACIT – 723	Security for Implantable medical devices with wireless connections: using multi-factor authentication approach B.R.Leelavathi, G.C.Sathish
	IACIT – 784	Community Detection Using Keyword-Based Search Ganesh Gowda B C, Harish Kumar SK, B Keerthi Raj, Hruthik C K, L A Lalitha
	IACIT – 660	Artificial Intelligent Robot For Enforcement Surveillance (AIRES) Prajwal Kulkarni, Meenakshi Sundaram.A
	IACIT – 731	Platform To List Best Stocks In The Market Using Rule-Based Scoring Algorithm Prakash Shet, Sasideh Babu Suvanam
	IACIT – 752	Barbie With Brains:An Interactive Robot Jasmine J, Kavya Parameshwar Bhat, Keerthana L G, Ravishankar H

## **Mobile Computing & Cloud Computing - 2**

Session 2-D  12:00 Noon To 1:00 pm	Paper ID	Title & Authors
	IACIT – 697	Comparison & Adoption Of FOSS Serverless Computing For Enterprise Openstack Cloud Platform Rajesh Rompiccharla, P. V. Bhaskar Reddy
	IACIT – 725	Power-Aware Virtual Machine Migration For Resource Allocation In Cloud Mohammad Sulaiman Hyder, Vijeth J, Mohammed Khaled Bawzir, Supreeth S
	IACIT -797	Enhanced Approach For Secure Stored Data In Cloud Abhishek Gaur, Mallikarjun Shastry PM

## **Digital Image Processing – 2**

Session 2-E  12:00 Noon To 1:00 pm	Paper ID	Title & Authors
	IACIT – 513	Creating 3D Alphabets Using Augmented Reality Vibha Shreya Raju, Divyashree R, Roja J, Vinutha B, Arunakumara B
	IACIT – 534	Enhancing Travel Experience Using Virtual Reality Sharlene Rodrigues, Shivani K R, Shyni Supritha C, Shravani J A, Nikhil S Tengli
	IACIT – 552	Immortal Augmented Reality Game Kamjula ChandraSekhar, Jinitha M J, Lakshmi Sai Reethika, Jayant Ramesh, Archana B
	IACIT – 540	Real Time Drowsiness Detection Using OpenCV Sandesh. S.V, Ravi. C, Praveena. S, Pradyumn Kulkarni, Manju More
	IACIT – 602	Virtual Telepresence Robot Controlled With Hand Gestures (Vitel)

		Nitesh V, Nitish Durairaj, Navaneet Manikandan, Nithin Mohandas, Shruthi G
	IACIT – 775	Assistive Communication For Blind S Mohammad Asif , Srikanth MM, Sumanth HC , T Munisekhar, Vani Krishnaswamy
	IACIT – 802	Software Tool With Animation Support To Graphically Display Signals With Colour Effect Sneha Pattar, G C Sathish

### **Data Mining & Artificial Intelligence – 3**

Session 3-A  2:00 pm To  3:30 pm	Paper ID	Title & Authors
	IACIT – 601	Grocery Management Using Iot Raksha R K, Rahul Oliver, Ritu Shetty, R Rishabh Keeshan, Shantala Devi Patil
	IACIT – 655	Medicus: An E-Medic Consultancy For Hospital Management System A. Kanthi Kiran Reddy, L. Vasista C Reddy, A.V. Guna Sekhar Reddy, Vishwanath Hulipalled
	IACIT – 777	Feed The Needy- An Application For Minimising Food Wastage BhavanGowda N, Mithun M, Manoj, A R Manish Varma, Surekha Thota
	IACIT – 783	Food Quality Monitoring System Using Iot Geetha V, Indu C R, Udayarani V
	IACIT – 824	Content Based Tweet Classification In Twitter P.Snavaja Krishnan, Sumitha P, Sushmita S, Vinaya R M, L A Lalitha
	IACIT – 834	Heart Disease Prediction Using Combination Of Logistic Regression And Random Forest Algorithm Soyna.R, Gopal K. Shyam

### **Data Mining & Artificial Intelligence - 4**

Session 3-B  2:00 pm To  3:30 pm	Paper ID	Title & Authors
	IACIT – 515	Towards Recommending Courses In A Learner-Centered System Based On Trend, Faculty And Student Course Preferences Abdulrahman Mohsen Zeyad, Shantala Devi Patil
	IACIT – 535	A Movie Recommendation System: Using Content-Based And Collaborative Information Folord Suhas S, Naveen Ganesh, Bello Mohamed, Laxmi B Ranavare
	IACIT – 597	Hospital Management System using Web Technology KotapatiSaimanoj, GrandhiPoojitha, KhushbuDevendra Dixit, LaxmiJayannavar
	IACIT – 616	Tridaily Attendance Management System Using Facial Recognition Kishen V, Manikanta O, Lakshmi Narayana S, Nimrita Koul
	IACIT – 624	Matdaan: A Web Based Democratic Framework Keerthi K.N, Kumud Sharma, Kusuma D, Shalini Tiwari
	IACIT – 632	Automated Life Management Application Priya Kothari, Rachana Patil, Rashmi U, Vinay Kumar
	IACIT – 663	Web Based Admission Counselling System Rajeev C V, Sawan Kumar, Rahul Kumar, Sachin Kumar, Bindushree D C

### **IOT & Wireless Sensor Networks - 2**

Session 3-C  2:00 pm To  3:30 pm	Paper ID	Title & Authors
	IACIT – 562	Attendance System Based On Face Recognition Santosh D Kolul, Sahil Chachra P, Rohit K, Rishabh Sahu, Rajesh I S
	IACIT – 671	Card Authentication Using Biometrics(Face) K.Ajith raj, G.Joshna chowdary, K.Ruchitha, G.Sumanth, Ranjitha U.N
	IACIT – 509	Water Quality Monitoring And Filter System To Preserve Water Resource Using Iot Ruchitra K, Reshma N , Seema Lb, Sharanamma, Suvanam Sasidhar Babu
	IACIT – 521	Digital Driving System For Vehicle Monitoring

	S Pallavi, Reema P, S Riyaz, R L Nikhilaa, A Ajil
IACIT – 807	Ingenious Water Heating Coil Using IoT Vooka Sai Divya, Y. Sai Lakshmi, Y. Sathya Tejaswi, Bhaskar Reddy P. V
IACIT – 747	Traffic Control System Using Image Analysis Shreedhar, Tanishq, Samuel Gladwin Jose, Syed Md Wajahat, Vishwanath R Hulipalled
IACIT – 623	Vehicle Unlocking System Based On Face Recognition Varshitha T M, Syed Naznin, Thanushree H C, Yerriswamy T
IACIT – 633	An Efficient Flood Identification And Cautioning System Kolhapuram Shreyada, Laluprasad M, Manasa C H, Resham Sundar Kumar, Vinay Kumar M

### **Data Mining & Artificial Intelligence - 5**

	Paper ID	Title & Authors
Session 3-D  2:00 pm To  3:30 pm	IACIT – 558	Abstract Extraction From Audios Aditi H M, Akhila Kulkarni, Akshatha Janardhan, Anuhitha N, Shruthi
	IACIT – 622	Student Project Repository Using Opac M.L Sree Charan Reddy, Muthyala Vengal Reddy, Nanda Venkatesh, Nayanashree N A, Nayanashree N A
	IACIT – 656	Utility Payment And Record Monitoring For The Simplicity Of Prototyping Client's Necessity Shivashant, Yogesh R, Prathibha V, Kavya R, Shilpa N R
	IACIT – 652	Web Server Based Stackgan-V2 Implementation Gokul Dev, Shehan Silva, Adarsh R Nair, Jalayrupera, Sowmyasundari LK
	IACIT – 661	E-Learning Consultant Sushan M, Subhash S, Shashwath M, Shashwath S P, Ashok K Patil
	IACIT – 693	Rail-Road Reservation System Using Vb.Net And Ms Sql K Yogeshyogesh, Karthik P, Manoj Maharrshi R M, Shilpa V

### **Machine Learning – 2**

	Paper ID	Title & Authors
Session 3-E  2:00 pm To  3:30 pm	IACIT – 568	Emotion Based Music Recommendation System Likith S Gowda, M Annapoorneswari, Mahitha R, Shaik Abdul Aziz, Dr Ashwin Kumar U M
	IACIT – 569	Stock Market Forecasting Chirag, Deepraj Phunyal, Biswabrata Mazumdar, Deepanshu Kumar, Archana B
	IACIT – 572	Fake News Identification System Mrigank Satapathy, Nithin C Hegde, Pankaj Jajoo, Adarsh Narayan, Ranjitha UN
	IACIT – 574	Detection Of Cyber Attack In Network Using Machine Learning Techniques Swamy, Abhishek, Revanna, Ashwinkumar. U. M
	IACIT – 583	Credit Risk Analysis Sudhir Kumar Pandey, Dr Ashwin Kumar U M
	IACIT – 586	Hyperspectral Satellite Image Classification Using Deep Learning Smitha N, Sriprya M, Srivatsa B, Suma Mv, Mallikarjun M Kodabagi
	IACIT – 546	Method To Filter The Unwanted Messages For OSN Manoj Kumar, Sanketh Vadaje, Raghavendra Reddy
	IACIT – 573	Using Recommendation System To Help Students Choose A Career Field Based On Their Interests Shivendra Saurav, Shubham Kumar Giri, Shivani Sharma, Hiwani, Surendra Babu KN

### **Blockchain Technology**

Session 4-A	Paper ID	Title & Authors
	IACIT – 539	Electronic Voting System Based On Blockchain Technology

4:00 pm To 5:00 pm		A. Aravind, Ayush Panjiyara, Aditya Agarwa, Ayush Jaiswal, Nikhil S Tengli
	IACIT – 642	Smart Contract Authorization Using Blockchain U.Sailesh, U.Aditya varma, S.V.Subba reddy, T.Tharun, Shilpa V
	IACIT – 717	Blockchain Bidding System Archana B H, Monica B, Kishan Achar T R, Pallavi M , Dr Ashwin Kumar U M
	IACIT – 745	Blockchain Based E-Voting System Using Ethereum Harshiniy U, Himarshini Ganga, Janhavi M P, Gopinath R
	IACIT - 666	Real Time Eye-Tracking for Password Authentication Tasmiya Mairaj, Zaveriya Roshan, Vrinda Gopakumar. Priyanka Bharti

### **Mobile Computing & Cloud Computing - 3**

Session 4-B  4:00 pm To 5:00 pm	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT -523	An Efficient Encryption And Decryption Method For Image Steganography Ranjitha R, Mallikarjun Shastry PM
	IACIT – 565	Self-Billing Smart Cart Gagan N C, Anusha G, G Roopa, Vani Krishnaswamy
	IACIT – 590	Spam Tweet Detection In Twitter Suma Chandu, Tharun Kumar, Meghanath, Geetha B
	IACIT – 620	Blood Bank Management System Using Android Application Snehasish Banik, Sriyansh Ghosh, TV Poonam, Laxmi J
	IACIT – 639	Mobile Application For Product Showcase Using Ar Shashank Gupta, Shruthi S M, Sourav Gowda, Sujay B R, Supreeth S
	IACIT – 651	The Synergy Of Augmented Reality in Education K Diresh Kumar Reddy, Parvataneni Yuvaratna, Mohith T Reddy, Anooja Ali
	IACIT – 587	Mobile App Simulator Chetana Reddy, Chandana M, Kavya. H R, Yerriswamy T

### **Data Mining & Artificial Intelligence - 5**

Session 4-C  4:00 pm To 5:00 pm	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT - 571	Forecasting Of Bse-Sensex @Eod Using Astronomical Parameters Channaveeraya Wm, Prabhakar M
	IACIT – 692	College event management framework Dhanush S N,Koushik R ,Mukul B,Shilpa V
	IACIT – 763	Design And Implementation Of A Mobile Application For A Question Paper App Based On Cordova Framework Yashas Raju N, Vishal Shenduri, Chidananda M, Vinay Kumar
	IACIT – 806	Donor Friend Yerasi Jayasimha Reddy, Yerasi Kedarnath Reddy, Rahul Vasishta, Rahul David, Shantala Devi Patil
	IACIT – 749	Dynamic Intelligent Virtual Assistants Based On User Preferences Adarsh Anand, Saket Savarn, Sunilkumar S Manvi
	IACIT – 796	Network On Chip - A Study On Ricobit (Ring Connected Binary Tree) Sneha Kashyap, Sanju V
	IACIT – 819	Secured Online Credit Card Transaction Using Facial Recognition As An Authentication Process Devraj Yadav P, Chermann Mt, Boya Harinath, Deepak J, Sheelavathy K V

### **Network Security**

Session 4-D	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT – 528	Design Of An Optimum Channel Sensing Mechanism For Cognitive Radios J Divya Lakshmi, Mallikarjun P Y, Rangaiah L

4:00 pm To 5:00 pm	IACIT – 635	Sensitive Data Sanitization Along With Encryption And Third-Party Auditing Pavan Kumar S, Nimmanapalli Sai Abhijith Reddy, Nithesh G, Mrinal Mohan, Shruthi G
	IACIT – 636	Server Monitoring Using Raft Algorithm Aman Srivastava, Asad Ahmad, Akash Hadagali, Thirumagal E
	IACIT - 724	Cyber Hacking Breaches Namratha, Pooja Nallapareddy, Rohith, Pooja Rajamani, Sheelavathy K V
	IACIT – 730	Crime Scene Prediction By Detecting Threatening Objects Using Deep Learning Techniques T Rishitha, Tejaswini N, Sini Robin, Lakshmi K, Sailaja Thota
	IACIT – 744	Seamless Persistent Storage Availability for stateful application running on Kubernetes platform Sai Kumar D, Dr Vishwanath Y
	IACIT - 514	Cloud Sanitization And Auditing Sai Sharan P, Ridaa Rauf, Nandini D, Ritesh V R, Gopinath R
	IACIT – 555	Smart Bus Automation Using Cloud Sensing Technology Sohara Banu, Punith S, Rajneesh S, Shanthan N A, Samarth Thammaiah C A
<b>IOT &amp; Wireless Sensor Networks - 3</b>		
Session 4-E  4:00 pm To 5:00 pm	Paper ID	Title & Authors
	IACIT – 522	Experimental Setup For Implementation Of Scalar Control For 3 Phase Induction Motor Using Svpwm Venu Gopal B. T, E. G. Shivakumar
	IACIT - 524	Query Completion Using Knowledge Graph: A Semantic Approach Vidya S Dandagi, Nandini Sidna
	IACIT – 533	Food Ordering System Using Iot Enabled Rfid Reader Suhas K C, Sudharshan Gowda G, Shashank G, Meenakshi Sundaram.A
	IACIT – 553	Traffic Monitoring System With Ambulance Safety Muskan Mahayash, Nishtha Tripathi, Neelakshi Punia, Palash Sharma, Raghavendra Reddy
	IACIT – 575	Smart Helmet Using IoT Ravva Nithin, Samara Simha Reddy, Sana Dheeraj Reddy, Sharat SK, Gopal Krishna Shyam
	IACIT – 581	IoT based Plant Monitoring System Using Blynk App Suhani Jain, Soumyashree D. S, Srilatha M. N, Swati S. Mathpati, Kiran M
	IACIT – 664	IoT based Baby Monitoring System for Smart Cradle Madhu M,Monica T M, Komal, Manisha, Bindushree D C



## School of Computing & Information Technology

### Second International Conference on Advances in Computing & Information Technology (IACIT – 2020)

#### Day – 2: Paper Presentation Schedule

**Thursday, 30<sup>th</sup>April 2020**

#### **Machine Learning - 6**

	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT – 591	A System To Exude Undesirable Messages From Osn Utilizing Rule Based System Sanjay Shyam, Akshaya B, Annapurna K B, Chaithra K, Shilpa N R
Session 1-A  10:30 am To  11:30 am	IACIT – 600	Deep Learning For Age Classification Using Facial Image Yeshwanth T M, Rakshith G, Sandesh Koirala, Roshan Shetty, Mallikarjun M Kodabagi
	IACIT – 604	Deep Learning Based Grammar Checker For Kannada Caryappa B C, J B Simha, Vishwanath R Hulipalled
	IACIT – 580	Human Behavior Recognition Based On Convolutional Neural Network (CNN) M. Akash Varma, Laxmi Jayannavar
	IACIT – 595	Machine Learning Techniques To Detect Breast Cancer Sherina Sara Jaison, Nayana R, Mounusha S, Mallikarjun M. Kodabagi

#### **IOT & Wireless Sensor Networks - 4**

	<b>Paper ID</b>	<b>Title &amp; Authors</b>
	IACIT – 596	Home Autonetics Using Internet Of Things B Lakshmi, D Raghavendra, G Chaitanya Sai, G Siva Teja, Vani Krishnaswamy
Session 1-B  10:30 am To  11:30 am	IACIT – 608	Multifunctional Defense Robot For Soldiers Based On Iot Sharath Simha, Lakshmi S, Venkat Sudheer, Harsha vardhanreddy, Chaithra M H
	IACIT – 610	Electronic Shoe : To Assist Visually Impaired Grace Juliet Jennifer, Harshitha U Y, Harshini V S, Prabhakar M
	IACIT – 613	Iot Design For A Rechargeable System In An Automobile Harsha L, Girish Sanjay Kumbar, Hemanth MS, Harish R V, Thanuja K
	IACIT – 614	Application Of Unsupervised Algorithm For Dwc Using Iot Karthik Reddy Kanjula, Vishnu Vardhan Reddy K, Jnanesh K.P, Thanuja K
	IACIT – 628	Aggregated Controlled Environment For Cultivation

		Adarsh HJ, Akshay.A, Channa Keshava.V, Anju, Raghavendra Nayaka.P
	IACIT – 683	Self-Driving Car Using A Simulator Anmol Kumar, Animesh Nath, B A Shivani, Arjun Singh, Nikhil S Tengli
	IACIT – 689	Iot Based Smart Helmet To Detect The Hazardous Situations And Accident Alerts Kavya M, Venkatesh Prasad
<b>Mobile Computing &amp; Cloud Computing - 3</b>		
Session 1-C  10:30 am To  11:30 am	Paper ID	Title & Authors
	IACIT – 699	Android Application Based Smart Parking Using Qr Code N.B. Mounika, Libina B Thomas, Mona Nirvinda P, Laxmi B Rananavare
	IACIT – 708	Online Health Care System Pramod Kumar, Prashanth D, N Rajesh, Praveen Deshmukh, K Amuthabala
	IACIT – 727	Medpoint-Medical Health Application Jayanth Kumar C, Niranjan G, Suresh G V, Ravishankar H
	IACIT – 779	Vehicle Accident Alert System Jude Abishek Satish, Hussam Taghi, Harsh Mishra, Jyothi Vaijapur, Sanju V
	IACIT – 790	R.O.H -The ultimate device for your safety and security. Maheen Huda, Merlyn R, Mahasweta Datt, Mihika Bhandari, Anitha K
	IACIT – 794	An Android based application on Hostel Management System G Mohit, Gaurav Suhag, GovindPrajapat, SailajaThota
	IACIT – 719	Emotion Based Music Player (Emotify) Akshobhya Rao BV, Fathima Rameesha Asokan, Husna Firdous, G P Prerana, Gopal Krishna Shyam
	IACIT – 780	A Pseudo-Intelligent Rock Paper Scissors Bot In Android Mustafa Shihab Assadi, Natasha Suman, Rachana Jagadish, Pavithra V, Anilkumar Ambore
<b>Digital Image Processing - 3</b>		
Session 1-D  10:30 am To  11:30 am	Paper ID	Title & Authors
	IACIT – 547	Real-Time Face Recognition System Using Lbp Vidhi Lakhotia, Abhishek Venugopal, Mohammed Niha, Bhavana M, G.Parthasarathy
	IACIT – 605	Speech guidance using Real-time object detection Naveen Kumar RV, Nayaz Ahamed I S, Neha Yadav, Hardik Pathar, Shilpa V
	IACIT – 682	Road Accident Detection System Sha Abdul Khudus, Shaarun Ajish George, Shubham Agarwal, Shaik Mohammad Abdullah, Nikhil S Tengli
	IACIT – 738	Automated Event Monitoring System Using Facial Recognition Mayank Bajaj, Madhav A, Mohammad KC, Ashwinth Singh P, A Ajil
	IACIT – 758	Public Safety Implementation of Facial Recognition Pavan Kumar P, Mohammad Sahal, Mohammad Shaham, Anilkumar Ambore
	IACIT – 793	3D Brain Tumor Detection using MRI images A. Sushma, Sunilkumar S Manvi
	IACIT – 765	Censorship Tool To Detect NSFW Content In A Video File Idris Shah Hyder, Harsh Ranjan, Harisha G, Kundan Kumar, Vinay Kumar M
<b>Machine Learning - 7</b>		
Session 1-E  10:30 am To  11:30 am	Paper ID	Title & Authors
	IACIT – 665	Prediction Of Heart Diseases In Diabetic Patients Joshua S, K A Ashik, K R Purshotama, Bindushree D C
	IACIT – 668	Automatic Attendance System For Using Face Recognition Based On Deep Learning Sandeep P, Sachin Y T, Shreesh Badiger, Basavaraj S. Hadimani

	IACIT – 670	An Efficient Deep Learning Approach For Pneumonia Detection Shravanthi R, Chandana M, Bhargava Ramamurthy, Ranjitha U N
	IACIT – 691	Student Academic Performance Prediction Using Machine Learning Likhitha V, M P Vaishnav, Kamachi Gayathri, Shreyas V, Gopal Krishna Shyam
	IACIT -702	Smart Circuit For Home Automation With Integrated Machine Learning Faizan Abedin, Farooque Azam, Meghana R, Durga S, Abhishek Kumar Prasad
	IACIT – 643	Digitalization of Hospitals using Hospital Information System Sirisha V, Tanuja S P, Smitha T M, Raghavendra Nayaka P

### **Machine Learning - 8**

Session 2-A  12:00 Noon To 1:00 pm	Paper ID	Title & Authors
	IACIT – 737	Smart Traffic Controller Using Machine Learning K S Vishruth, Samarth S M, K Bharadwaj Reddy, Jagadeesh C, Ravishankar H
	IACIT – 740	Kannada Character Recognition Using Convolutional Neural Network M Yamini, Manisha.C, Anusha.M, Manasa.M, Sarvamangala D R
	IACIT – 751	The Effect Of User-Generated Content Factors On Improvement: Usability For E-Commerce In Context Of Bangladesh Syed Arif Islam, Umma Khatuna, Ashok K Patil
	IACIT – 753	Object Detection Using Deep Learning Techniques Pratyush Singh, MD Faishal Khan, Rithik Kumar, Rohit Raj, K Amuthabala
	IACIT – 770	New Approach To Sentiment Polarity Detection By Using MI Techniques Raghavendra Reddy, Gopal K. Shyam
	IACIT – 653	Self Driving Cars The El-Dorado Of Future Technologies Sachin Sharngowda, Sagar B Dollin, Sanjay .K.R, Sanjay Kumar K ,
	IACIT – 703	Vegyzone Navitha C, Neha N, Nisheetha R, Niveda A, Shruthi G

### **IOT & Wireless Sensor Networks - 5**

Session 2-B  12:00 Noon To 1:00 pm	Paper ID	Title & Authors
	IACIT - 630	Design And Implementation Of An Intelligent Lpg Gas System Asad Fathima, Indudhar S, Tanusri, Manjunath S Reddy, Naveen Chandra Gowda
	IACIT – 649	Vijayank-A Smart Spectacle For Differently Abled People Ankita Singh, A.Mahasmr, Abhijeet Jena, Priyanshu Ra, Gopal K. Shyam
	IACIT – 672	Automatic Garbage Collection-Using Robotic Vehicle Suhitha C, Eshwari E, Dhanushree A, D.Silpa, Basavaraj S. Hadimani
	IACIT – 687	Application Based Smart Parking Reservation System Using Openalpr Tejas KL, Utkarsh Yadav, V Vijay Krishnan, Vishrutha KS, Mallikarjun Shastry PM
	IACIT – 698	Iot Based Black Box Device For Vehicle Tracking Manjunatha B G, K S Ranjith kumar, Karthik R O, Nataraj Urs H D, Kiran
	IACIT -705	Raliway Gate Control System Using Buzzer Saniya Gazala, Gopal Krishna A S, Shivarajan B Nagathan, Mahalakshmi VK, Lithin Kumble
	IACIT -735	A Survey: Solar Powered Iot Based Smart Garden/Agriculture Sangeetha Kumari M, Vishwanath Y
	IACIT -739	Iot: Empowered Alcohol Sensing System For Safety Driving in Two Wheelers Abhinava Dhanush T M, Premsagar, Karankumar, Narasimhamurthy H N, Chaithra M H

### **Machine Learning - 9**

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	IACIT – 818 AAA(All About Agriculture) K. Charitharth, TejusVarma Suraj, M Lekhana, Venkatesh Prasad
	IACIT – 728 Opinion Mining of Twitter Data Using Machine Learning Hanish S P, Raju Y, Sailaja Thota
	IACIT – 756 Movie Recommendation System Prajwal S, Sharan Kumar P, Sharath Kumar T L,Sagar Chavan, Anilkumar Ambore

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	IACIT – 814 Smart Blind Stick Pro Taraniya.I, Varshini Chaithra, Yeddula Divyasri , Nalam Lakshmi, Bhaskar Reddy

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	IACIT – 754 Lip Reading Using CNN Raghav K R, R Dushyanth Reddy, Sarvamangala D. R.
	IACIT – 781 Semantic Analysis For Document Validation

		Anush E, D S Kavya, Bharath Darshan Balar, Sarvamangala D. R.
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# ABSTRACTS

# **DATA MINING & ARTIFICIAL INTELLIGENCE**

## Comparative Analysis of Multiple Classification Algorithms on Heart Disease Prediction

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**Abstract**— Heart disease is one of the main problem caused among the global group of people. It is one of the leading reasons of demise in the large group of middle aged population. It is essential to have a framework which could efficaciously recognize the coronary heart ailment in lot of samples at once. The proposed algorithms used in our work is (NB) Naive Bayesian, (DT) Decision Tree, (KNN) K-nearest neighbor, (ANN) Artificial Neural Networks, in predicting coronary heart disease. These algorithms can provide the likeliness of patients getting coronary heart problems. Few of the performance factors used in predicting heart disease are by using the factors Accuracy, Precision, Recall, F1-Score. In our work, we majorly focus on identifying the most efficient algorithm among the DT, NB, KNN and ANN.

## Enhanced classification and DNA security on large scale dataset

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**Abstract**— In today's rapidly growing world, handling big data is difficult as it raises many concerns like analyzing the data, ease of accessibility, efficient storage, effective management as well as enhanced security. Therefore there is a need of a mechanism that can make the machine effectively learn the way to handle data along with proper authentication of data. So in this paper, we propose a mechanism in which all the above concerns are achieved. The mechanism consists of Pre-Processing of raw data that is fed as an input for Enhanced Classification which in turn produces blocks of data with the help of Enhanced Map-Reduce algorithm that is deployed in the public cloud with the unique identification of hash code generated for every block. The authentication of data for encryption and decryption processes is carried out with the help of DNA algorithm. Thus this scheme projects a beneficial approach in terms of security analysis and numerical analysis over big data.

## An Optimized model for Detecting the Performance of Credit Card Fraud

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**Abstract** — With the advancements in the Information Tech- nology and upgrades in the communication channels, credit card extortion is spreading everywhere throughout the world, bringing about financial loses. Despite the fact that credit card fraud avoidance instruments, for example, CHIPPIN are created, these components don't forestall the most well- known misrepresentation types, for example, fake card uses over virtual POS terminals or mail orders. Therefore, mis- representation recognition is the basic apparatus and most likely the most ideal approach to stop such extortion types. Right now, models dependent on decision trees and K-nearest Neighbor (KNN) are created and applied on credit card fraud recognition issue.

## Smart Face Recognition Attendance System

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**Abstract**— Though face recognition has been for very long time and has been used in many applications also, In this paper we will talk about the face recognition attendance system. This face recognition attendance system will capture, detect and recognize the person's face and mark the attendance. This facial recognition attendance system is intended to supplant the manual technique of taking attendance. which is tedious and hard to look after it. Though there is other way of taking attendance such as biometric and retinal based attendance system but they tend to be time-consuming. hence our smart face recognition attendance system is built

using the dlib with deep learning. This model has an exactness of 99.38 percent on the labeled faces of the student in the dataset and our project proposes this model for the implementation of a computerized face recognition attendance management system and we will be using the face recognition technique dlib with deep learning. Later when the student has enrolled in the system, the face recognition system recognizes the student by contrasting and the database containing a person's faces. This attendance system will be an effective strategy to manage and record attendance.

## **Mining High Utility Item-Sets Without Candidate Generation**

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**Abstract**— High utility are set of items which called out as revenue of the items in database, and extracting or mining these high utility sets are essential activity in verity of the day to day use applications and its one of the issue in data mining research area. Many existing procedures/algorithms are construct a candidate to recognize high utility revenue sets by overvaluing their utilities, and after that precise utilities of these candidate are calcuated. These procedures/algorithms are endup with overheading large number of candidates are made, yet by far many of the contenders are found to be not high utility after their distinct utilities are enlisted. We are introducing procedure/algoritm, naming HighUI-Excavator (High Utility Itemset - Excavator) as part of this paper for extracting high utility sets. HighUI-Excavator bring into play a novel structure, called utility-list, to store both the utility information about a thing set and the heuristic information for pruning the interest space of HighUI-Excavator and also identifying infrequent itemset as enhancement. By avoiding the generation overhead and utility calcualtionnumber of candidate sets, HighUI-Excavator can gainfully extract high utility thing sets from the utility records created from a mined database. We took a gander at HighUI-Excavator with the top tier alogorithms on many databases, and test outcomes show that HighUI-Excavator defeats these counts similar to both execution time and utilization of memory.

## **Client-side Secure Image Deduplication for Optimized Storage**

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**Abstract** — We all know the ability of images. “Pictures tell a thousand words”. And during this era of digitization which has given the benefit to capture top quality images at every moment by anyone making these pictures to be used as a means of visual communication and expression. As a result it takes great efforts to sort, store and maintain huge amount of high quality images which demands equally huge storage drives. Therefore there is a requirement for a technique which allows the user to save lots of his/her images to the drive, yet serving the aim of an ingenious, cost-effective and proficient storage. Hence this paper meets all the difficulties of having duplicate images in our storage and proposes an answer for an efficient use of space. In this paper, we impart a secure Deduplication scheme for near alike pictures using DICE. It stands for Dual Integrity Convergent Protocol. It presents a method to achieve secure image deduplication at the block level. The numbers of blocks that are stored in the cloud are undersized in number as the larger is the similarity between images.

## **Heart Disease Classification: A Feature Engineering Approach**

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**Abstract**— The healthcare applications are in the demand for rigorous medical data analytics algorithms. Machine Learning (ML) has taken a leading role in various data analytics field including healthcare applications. The ML algorithms are influenced by the various features of the medical data sets and eventually contribute to enhance the accuracy of classification of the diseases. In this paper, an attempt is made to experiment the level of influence of the various features of the Heart Disease Data set (HDD) through both feature selection and feature extraction techniques to enhance the classification accuracy of the various ML algorithms. Six ML classification algorithms have been deployed such as k-Nearest Neighbor (kNN), Decision Tree (DT), Gaussian Naive Bayes (GNB), Logistic Regression (LR), Support Vector Machines (SVM) and Random Forest (RF) in this study. The HDD consists of

303 records with 14 attributes of 165 patients being tested on heart disease. The HDD was normalized and partitioned as Training and Testing sets in the ratio of 0.8 and 0.2 before training the ML classifiers. After scaling, it was observed that there was a hike in the accuracy of the SVM Classifier from 65% to 87% which is the highest compared to all other models. Weightage of all the attributes has been computed using RF-based feature importance. The Principal Component Analysis (PCA) based SVM was found to give the highest accuracy of 90.16% among all the classification models employed in the study.

## **Towards Recommending Courses in a Learner-Centered System based on Trend, Faculty and Student Course Preferences**

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**Abstract**— Recommendation systems have become essential today in different areas of life, they help the learner to find content in large sets. Also, the recommendation engine can display the elements that users may not have thought of searching on their own and never-expected results."Today we are using a search engine to look for products, tomorrow we will just explore the proposals submitted". To be aiming to enhance student's skills and provide them with training courses to raise their opportunities for good careers. Also, to help people behave intelligently and make the right choices. Student assessments are traditional methods to predict student performance such as failing or passing or forecasting successful completion of the course, in this continuation, predicting the classification of degree or achievement. This paper discusses the course of their interest and proposes a solution through a recommendation system that may help a student to make the the right choices through experienced support.

## **A Movie Recommendation System: Using content-based and collaborative Information**

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**Abstract**— Since the late 20th century, the number of internet users has increased dramatically as has the number of web searches performed on a daily basis and the amount of information available to us. However, not all data that we get in search results are reliable or relevant which means that it may become more and more difficult to get satisfactory results from web searches. To solve this problem we use recommendation systems. Recommendation system shows us only the relevant information. Recommendation Engines can make various suggestions about artifacts to users. In our day-to-day lives, they may predict whether a user may like to buy a particular product online or if they are interested in a particular movie or are interested in listening to a particular song. To pick a movie, a user might search various websites to find a highly rated and well-reviewed movie which is very time-consuming. Here, we have created this recommendation system using the following methods. Content-based filtering takes keywords from the movie dataset and suggests it to a relevant user. Social based filtering takes reviews from multiple users and suggests it to another user. However, these methods do not use a significant amount of information available. This paper is an approach to a recommendation that is able to use both user ratings and other information available that will help in recommending movies to users. Our method uses these methods on a dataset containing more than 5000 different movies.

## **Tridaily Attendance Management System Using Facial Recognition**

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**Abstract**— Attendance is a process by which students or employees who are a part of an organization are identified and their presence is kept track of, for administrative purposes. The existing system employs the usage of pen and paper which is tedious and mundane in nature and requires ample time to identify students or workers to mark them, either present or absent after which, the

same needs to be updated either online or offline to maintain records. The designed system cuts down the entire process to an almost non-existent process, wherein the attendance of a student or employee is marked as and when the facial features of the employee is detected and recognized. Soon after the facial features are recognized, the required updates are made on a centralized database, which can be accessed and managed locally within the organizational perimeter. Implementing such a system will not only save time, but make it almost impossible to manipulate.

## **Matdaan: A web based democratic framework**

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**Abstract** — Voting is one of the fundamental right of all the citizens of a country. The percentage of people coming forward to vote is decreasing day by day in a large scale. The reason behind it is people who are away from home need to travel a large distance to cast their vote, disability, lack of interest, bad weather conditions and many more. The existing voting system does not provide any special facilities for the disabled to cast their vote. It is also expensive, unskilled personnel, limited polling materials and so on. The proposed online voting system seeks to address the above issues. The specified system increases the speed of counting ballots, reduce the cost of paying the staff, improved accessibility for disabled voters and no miscounting of votes.

## **Automated Life Management Application**

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**Abstract**— In the busy life schedule, people find difficulty in managing their personal and professional details which are needed in certain situations and retrieving them instantly will be a time-consuming task without which fatal consequences would be faced. It is very helpful to have some means to access to one's health status and other aspects like blood group. One finds it difficult to manage the income sources and expenditure in their day to day life. In this regard, we have planned to design a web application that can store all the necessary information of an individual on one platform that can help to store and retrieve such information as & when required with safety and privacy measures implemented. This web application can be helpful in situations like when a person goes to bank to open a bank account, he would require necessary details such as Aadhar-card, PAN card etc. This web application can be accessed in any system and all the necessary documents cab be shown right away instead of carrying them.

## **Abstract Extraction from Audios**

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**Abstract**— Abstract extraction from audios is the method of identifying the beneficial and essential information from a given audio. This process involves speech signals to be converted into a sequence of words, other linguistic units by making use of an algorithm which is implemented as a computer program. An extractive speech abstraction method is devised on the obtained sequence of words. Extractive speech abstraction normally works as a binary classifier determining whether a sentence is a part of the abstract or not. As a result, using rank based classifiers, we represent the importance among sentences. Based on the weights assigned, the sentences are ranked. Consequently, a high-quality abstract is extracted from the input by choosing the sentences which are highly ranked and formed extract is stored as a text.

## Student Project Repository Using OPAC

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**Abstract**— Web OPAC (online Public Access Catalogue) is widely being used to access E-learning. In this project, our aim is to provide a platform for users to gain references of projects which is already being exist in the library. A desired outcome is providing a complete insinuation of the extant project, by the organization through the OPAC. The users can also upload enunciate of their project and also examine the existed projects. Therefore, the intend of this paper is to provide an extensive information resources of projects which is needed in the progress of designing the target project.

## Utility Payment and Record Monitoring For The Simplicity Of Prototyping Client's Necessity

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**Abstract**— With given opportunity by internet. The number of tasks that can be initiated and accomplished are boundless, one of the regular chore which is carried out with help of internet happens to be paying of monthly bills, which is done by everyone. If not, almost majority of population. Paying bills through online is not a very unfamiliar process and is created to make process easy, but we doubt upon the existence of the system which are dedicated completely to online automated billing systems which are free from miscellaneous add-on functionalities, which we think that is not required and can be made more functional. In this paper we propose automated billing system particularly for electricity, for ease of prototyping our concept, that allows the users to pay the bills online, store separate database for individual users and also record power consumption.

## Forecasting of Bse-Sensex @Eod Using Astronomical Paameters

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**Abstract**— The main aim of this research/experiment work is to explore the relationship/association between selected astronomical parameters and the End-Of-The-Day (EOD) stock index returns. This relationship could be utilized to forecast the expected outcome of EOD closing. The present research work evaluates the effect of selected astronomical parameters (Moon-Phase) on the past 39 years of Indian BSE-SENSEX index data and forecast the probable future day closing i.e. whether positive or neutral or negative closing. The system would eventually filter the stock index data for selected astronomical parameters for a given day and find out the Strike-Rate (number of bullish days & bearish days), Average-Daily-Returns (ADR), Standard Deviation, Range, Gap-Ups/Gap-Downs. These parameters along with the historical plot of ADR for each Moon-Phase versus date has been analyzed to forecast the probable EOD closing for a given date.

## Semantic Analysis For Document Validation

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**Abstract**— Every year many competitive, institutional and non-institutional examinations are conducted. Most of the institutional exams demand descriptive type answers. However, only objective answers are being evaluated by the machines effectively. Evaluation of descriptive answers has always been a hurdle in the development of Electronic learning. The existing systems consider just the keywords or frequency of the terms but not the meaning of the answers while evaluating. The proposed system is expected to solve the above problem by using dependency parsing. Here we make use of the relationship between the terms in a text to extract

its meaning. The system is expected to enhance the evaluation process by reducing the time and manpower thereby improving the quality.

## Community Detection using Keyword-based search

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**Abstract**— Social Networking platforms play a very important role these days in day to day human life. It has become a necessity among people to update everything they do and every place they visit. This action is a mere habit to people, but very essential data for data processing. One such social platform that is trending and provides data in abundance is Twitter. All kinds of data are readily available, it is to be mined and used at user's will. In this paper we discuss the possibility of implementing keyword search in XML, geospatial datasets and also Keyword- Based image search on Twitter data using Louvain Algorithm in an attempt to make the process more efficient.

## ECG Pre-processing and Clustering of Heart Rhythm

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**Abstract**— ECG is an abbreviation of electro cardio graph and it is measured of electric activity of blood pumping organ which is reproduced on article. The ECG consist of PQRS waveform. QRS is where the complexity or fault in heart is usually identified. Noise is one of the major cause which distortion in ECG. Then to overcome filters are uses to cancel noise from the signal which help for accurately detection of the faulting heart. Our aim is to digitalize and pre-processing of ECG or paper-based ECG. The ECG papers are collected from the patient suffering from Bradycardia, Tachycardia and Normal individuals. The ECG is crop and scanned for further processing. The next stage is Binarization which converts color image to binary image, which is further pre-processed that involves removal of the noise using the filter like Butterworth SOS and median. Further peaks are calculated to extract QRS, which is stored in csv file and is used for clustering process.

## Prediction of Oral Cancer Using Data Mining

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**Abstract**— Cancer is one of the dangerous diseases. Its growth rate is very high. Among all the types of cancer oral cancer is can be considered as one of dangerous cancers which originates from the oral cavity& neck. Overuse of tobacco and smoking cigarettes is the primary reason for developing oral cancer. India has the highest number of oral cancer patient. In this project we are using data mining technology. Some of the data mining technologies are classification algorithm, clustering method etc. Among all these technology a suitable method is chosen for better and easy classification of data. These techniques give relationship between the data.

## Hybrid predictive model for Breast Cancer detection

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**Abstract** — Cancer is a huge concern around the globe. This is a disorder that in many instances is deadly that has impacted many people's lives and will continue to impact many more people's lives. Breast Cancer is the second most cause of deaths in women. While cancer can be avoided and controlled in primary stages, an enormous percentage of patients are very late diagnosed. In one year, 40,000 women die from the disease, a woman died of the disease every 13 minutes. This is much harder to treat early breast cancer diagnosis. This paper presents a hybrid model which is a data mining technique to classify the smallest subset of characteristics that will guarantee a very reliable diagnosis of breast cancer as either benign or malignant in early detection. Naïve Bayes, Support Vector Machine and Random Forest classifiers are performed where they also calculate the time complexity of each of the classifiers. In this paper, the classification of Naïve Bayes is concluded as the best classifier with the lowest time complexity compared to the other two classifiers. Comparison of reliability of these three algorithms by precision, accuracy, recall and f-means, tests high comparison to the other classification algorithm. Such results are very favorable and can be used for diagnosis, prognosis, treatment and recuperation. The overall build hybrid model using ensemble method will be used to predict the cases based on the datasets with much higher accuracy.

## Machine Learning Based Sentiment Analysis of Distributed Customer Product Reviews data on Amazon

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**Abstract** — Recognizing and Analysis of textual data generated from various social media platforms has become one of the most essential requirements in today's Big Data era. The result of such analysis helps in many crucial businesses to gain clear insights about their business models and to eventually take crucial business-oriented decisions to improve their businesses. In this paper, an attempt is made to perform sentiment analysis on the distributed computing framework using the many Machine Learning (ML) models and Hadoop-based Spark programming model. The existing approaches towards sentiment analysis are limited to only a few brands and their products. Therefore, to integrate the learning abilities with distributed computing models on large textual data, we developed the recommendation framework that recommends the product to users according to user's feature requirements collected as the huge textual data. The study implemented the Gaussian Naive Bayes (GNB) and Random Forest (RF) on the Spark Big Data analytics platform to process huge textual data. The experimental results have shown that the two algorithms produce superior efficiency over other methods while processing big sentiment data sets.

## Security for Implantable medical devices with wireless connections: using multi-factor authentication approach

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**Abstract** — Modern wi-fi enabled implantable medical gadgets (IMDs) began to be extensively delivered to scientific customs in early 2000s, when devices such as cardiac implants, insulin pumps, and neurological implantable pulse generators (IPGs) began with features like wi-fi controls and monitoring functions. The improvement of the wi-fi gadgets has modified the panorama of security in the clinical area. There are many wireless medical device threats like denial of service, modifying data, tracking the patient. Securing these implantable clinical devices against assault without compromising affected person health requires balancing protection and privacy objectives with traditional desires including safety. Moreover, the modern-day IMDs resource delivery of telemetry for far off monitoring over lengthy-variety, excessive-bandwidth wi-fi links, and growing gadgets will communicate with different interoperating IMDs. Wireless manipulate features permit attackers to govern IMD settings from past the instant place of the affected person, whilst networked IMDs are at risk from attacks originating anywhere in the world.

## Hospital Management System using Web Technology

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**Abstract**— Today's web-based technology offers many online services in almost every field. Every major industry is converting and establishing a digital front for all their major operations to get closer to the booming digital market. In today's world the information flow is very fast and redundant means won't add to the betterment of the individual or the organization that's using them. Online connectivity is now a must for all the well organized and well managed establishments. One such field is Healthcare where the digitization of information should happen rapidly and efficiently. This paper addresses that particular region and paves a way for the creation of a software that helps to an easy transition from paperwork to e-papers. The paper describes an idea of such a web-based platform that eliminates the need of paper prescriptions in the Hospitals that proposes E-Medical Management which will increase the efficiency of patient management, schedule management of the doctors and give universal access to the patient data anywhere in the hospital.

## Web Server Based StackGAN-v2 Implementation

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**Abstract**— Implementation of StackGAN on a website with the help of a web server to generate unique pictures based on a description given by a user. Computer vision generating good quality images from the user's text description is a troublesome problem and has many useful applications. Samples from current Text to Image methods can essentially demonstrate comprehension of the explanations given, but they fail to provide the information needed and the vivid sections of the objects. With this paper, we use Stacked Generative Adversarial Networks (StackGAN) to get realistic image using the text descriptions given by the user. Via a method of sketch-refinement we break the hard issue down into more manageable sub problems. We have used StackGAN because StackGAN-v2 shows more robust training behavior than StackGAN-v1 by approximating several distributions together. In StackGAN images are generated from different branches of the tree at multiple scales corresponding to the same scene. Comprehensive tests and comparisons with benchmark data sets indicate that significant changes are made by the suggested approach in generating photorealistic images based on text descriptions.

## E-Learning Consultant

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**Abstract**—There are several e-learning platforms obtainable for a learner. it's terribly troublesome task to choose which is the best platform and which platform is appropriate. during this project we are building a e-learning consultant web site that shows all the relevant courses for the learner from the list of e-learning websites. So, it provides several relevant e-learning platforms. The learner will currently choose the course from a selected platform supported description provided, conditions and criteria etc. once a learner desires to be told a course from an internet platform then this web site provides several MOOC (Massive Open on-line Courses) that is offered in numerous platforms. Can compare completely different courses from different e-learning platform supported the certification sort, duration, topic coated, instructor, and other necessary factors. This e-learning consultant web site opens elect the chosen course on the platform that was selected by the learner supported the condition and his interest. It saves the time of the for selecting the courses from totally different platforms and it avoids the user to pick out a wrong course on wrong platform.

## Rail-road reservation system using vb.net and ms sql

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**Abstract** — RAIL-ROAD RESERVATION SYSTEM contains the small print concerning train calendar and passenger reservations and price ticket records. A Railway's Data base contains all trains with their out there. Data base's data is imported and maintained through a Schedule Distribution System over standardized interfaces. One of the core functions of the index management of railway reservations is that the internal control. Internal control steers what percentage seats area unit out there for the various Booking Categories purchasable together the expense and booking conditions stored in the System with the price for each sold seat is determined.

## College event management framework

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**Abstract** — College event management framework deals with the maintenance of events of university. College event management framework is an automation system, which is used to store information of college. It includes everything from registration of a new event in college to providing attendance for those who participated in the event. By doing so we can notify the students and also reduce the probability of the students who gets proxy attendance. This additionally offers with retrieval of data via an INTRANET primarily based campus extensive portal. It collects associated statistics from all department of an organization and continues documents which can be used to generate reviews in various bureaucracy like instructional, cultural and sports. It deals with all kind of student details involving in academic, cultural, sports and other resources. Different queries and reports can be placed which will be taken care by the resource person. Automation system which helps in the storage details of the events and information of a college.

## Design and implementation of a mobile application for a question paper app based on cordova framework

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**Abstract**—In our day to day life, we come across many useful mobile apps, which are beneficiary for human life specifically for students for educational purpose- can be framed in this form. Our paper comprises of the creation of a question bank app, for the Karnataka PU board, Engineering and Commerce Students. Creation of the app is done with the help of apache Cordova software. The app is being developed mainly to help the Karnataka board PU, Engineering and Commerce students to achieve good marks in their examinations and to mould a good future for them. This app helps students to build confidence during examinations.

## Donor Friend

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**Abstract** — Organ donation is the process when a person allows an organ of their own to be removed and transplanted to another person, legally, either by consent while the donor is alive or dead with the assent of the next of kin. Our aim to create an app which increases the donors and transplant faster without damaging the organs. The purpose of the app Donor Friend is to automate the existing manual system by the help of daily usable mobile, full filling their requirements, so the donations are done more easily and faster. Donor Friend android application, as described above, can lead to reliable and fast response system. Thus it will help in better utilization of resources. Donation affects more than the donors and recipients. It also affects the families, friends, colleagues, and

acquaintances who love and support those in need of transplantation, and who benefit from their renewed life and improved health after transplant. Organ donation provides a life-giving, life-enhancing opportunity to those who are at the end of the line for hope. And the need for organ donors is growing.

## **Network on Chip - A Study on RiCoBiT (Ring Connected Binary Tree)**

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**Abstract**—The increased requirement of heterogeneous core was becoming an another issue because if one processor had high processing power then the other one had less power, for this reason the bandwidth, scalability and even the power efficiency was in high demand, to overcome on all these methods, Network on Chip came into picture. Thus using Network on Chip, we can transfer data in the form of packets. It basically follows layered structure of protocol stack. Network on Chip consists of Routers Processing elements and a Network interface. It uses a Network which is similar to Wide area network (WAN) but it does not use Wide Area Network. This paper will be the discussion on a hybrid architecture that is ring connected binary tree, so that a better topology with reduced latency and increased bandwidth can be used in NoC. The paper also discusses about the performance parameter and its methodology.

## **Evaluating Semantic Similarity and Centrality on Gene Annotation**

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**Abstract**—Gene Ontology (GO) is a vocabulary available in bio informatics that indicates the functionality of proteins and genes. This dynamic vocabulary demonstrates the functionality at cellular component, biological process and molecular level. Different methods are there to evaluate this semantic similarity focusing on multiple approaches. In this paper we use jackknife methodology by considering five popular similarity measures. Protein Protein Interaction network (PPI) is created based on these similarity values, thereby leading to the formation of clusters of identical or similar protein complexes. There are various methods available in literature to detect the essential proteins. These essential proteins are the hub nodes in the network. To form clusters of these networks, we apply various centrality measures to identify the most influential node. The clusters so formed help us in easy identification of the category of protein complex they belong to. Disease pathways are disintegrated and reasonably implanted in PPI network. So the research to discover the disease pathways over the set of predefined gene annotation can provide further advances in disease gene discovery.

## **Lip reading using CNN**

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**Abstract** — Communicating with visually impaired people, or during noise or disturbance can lead to poor communication or loss of communication. The purpose of this project is to overcome the communication loss by creating a video interface. The video interface is used to capture video of a talking person and is converted into text which is displayed on the screen. The video interface is developed using a deep learning algorithm called Convolution Neural Network. The architecture used is VGG16 and the model is trained and tested on MIRACL -V1 data.

## Locating Missing Persons Using Artificial Intelligence

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**Abstract**— Every day more than five hundred missing person complaints are approximated to go unanswered in India. an organization called as find me group FMG that is currently active in the united states led by former field experts is committed to solve the problems that lead to such scenarios. they have introduced and made use of the missing person intelligence synthesis toolkit mist which adopts a driven-data approach to the given problem. using the same approach and slightly building upon the foundation provided by FMG we aim to tackle this problem by taking search locations on the basis of the data on hand ranks and orders the locations based on the likelihood as well as the probability allocated to the search areas based on the prior information and previous performances that are taken individually as well as a group.

## Heart disease prediction using data mining

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**Abstract**— The health sector at present contain the information that are hidden and which are important in making decision. Data mining algorithms such as Naïve Bayes algorithm, decision tree algorithm and random forest are applied in the research for heart disease prediction the result show the comparison between the three algorithm and selecting the best one among three, the Random forest algorithm will provide the more accuracy can compared to all the three algorithms.

## Artificial Intelligent Robot for Enforcement Surveillance (AIRES)

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**Abstract-** Most of the military drones are very expensive and therefore cannot be used every time, and if the drone crashes, the loss is beyond recovery. Hence such drones are operated only in rare cases. To make a drone that can be used for the military purpose, the control system must be more precise, and the drone must sustain windy conditions and cold weather. The challenge is when the drone has to slip through the wind and also to maintain the speed judged by the pilot. Therefore powerful motors which achieve high velocity to function against the wind are used. Also, expertise is required in piloting the drone.

## Platform to list best stocks in the market using rule-based Scoring Algorithm

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**Abstract**— There are thousands of stocks are listed under every stock exchange, each stock exhibit different performance in market, based on technical trends, fundamental strength of the stock, national and international affairs, financial decisions by government and trader's mindset. Picking right stock to invest for short term or long term with such fluctuating influences on market and huge data set is more challenging. Successful traders are use their own analysis to pick the right stock from market. This processed approach is to solve this use case by providing platform to user that uses customized Scoring Model Based Algorithm with providing user to customize their rule set.

## Barbie with Brains: An Interactive Robot

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**Abstract** - The rapid growth of modern-day technology has paved way for innovative ideas of which one of them is discussed in this paper, that is “Barbie with Brains”. This Barbie is contradictory to the other dolls which stays idle, perhaps interacts with humans especially kids, just like any typical person would do. This interactive Barbie becomes more charismatic with its breathtaking features, like Barbie itself being a knowledge hub for education purposes, which benefits children in their schooling and learning, where sometimes there is no need of any knowledge or teaching backup, while Barbie is around. Some of the fascinating physiognomy of it, is to make kids feel comfortable with their own toys by initiating conversation, its ability to recognize faces, detecting emotions, plays comforting songs and related messages. Detecting harmful objects and obstacles around the kid or anywhere to it, serves as a safety measure, it clicks a picture and emails as well as drops an alarming message to parents or concerned registered people about the emergency situation.

## Content Based Tweet Classification in Twitter

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**Abstract**—Today, Social Media Networks are more powerful and popular than any other forms of media that exist and due to this global nature of social media, the amount of information available and being shared online by the users is tremendous. This large data that is available can be used for different purposes like marketing, data analysis, community detection, fraud detection, sentiment analysis, etc. In this work, we present a model to classify tweets in Twitter and therefore offer a solution to process large amounts of data and derive meaningful conclusions from the same. Here, we first collect tweets from different communities on twitter and process this raw dataset. This processed data is then converted into a vector form so that the textual information is converted to a numeric form for the machine to implement and then a text classification algorithm is applied to this dataset. Finally, after training the machine using this dataset, the working of the model and its accuracy is evaluated by using a dataset of test tweets where the machine predicts the category to which the test tweet belongs. With this model, we have been able to classify tweets into different categories and have achieved satisfactory results.

## Heart Disease prediction using combination of Logistic regression and Random forest Algorithm

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**Abstract**— Heart Disease is one of the leading cause of death globally, Heart Disease is also called as Cardiovascular Disease. There are many conditions for heart disease they are Blood Vessels, Structural Problems and Blood Clots. In Health care it is critical challenge to predict the Heart Disease. The death rate due to Heart Disease alone in US is more than 50% every year and women are higher risk of Heart disease than men due to Diabetes and Lifestyle. On recent research there is link between COVID-19 and CVD. In this paper the purpose is to research the prediction of Cardiovascular Disease using Machine Learning Techniques with various features and combinations using Logistic Regression and Random Forest Algorithm.

## Web Based Admission Counselling System

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**Abstract**— Now a day's people have a tendency to pursue their higher education. During this transitional stage, people might get distracted from their objectives or attainment of incorrect data from different source. This induces the need for the counselling as an important aspect of the current scenario. Counselling paves a way of interaction between the students and the management of an institution. This also helps to provide the students the prospectus of the different courses. Web Based Admission Counselling System is developed to enrich the undeviating counselling process. The existing process comprised of a lot of redundant data where the manipulation of the data was compromised. Labor-intensive record maintenance also surfaced various problems like security issues. This can be overcome by the WBCS by simplifying the process and diminishing the manual paper work. It also condenses the travel expenses, and time.

## Secured Online Credit Card Transaction Using Facial Recognition As An Authentication Process

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**Abstract**— Face Recognition is a biometric technology that is best and comes to mind during identifying and verifying a identity of a person. Subsisting authentication phases of Online transaction is not as secure, since it can be accessed by a third party if he is adequate, which is same with biometric dactyl gram scanners. Thus genuine time face recognition is something which cannot be hacked without the notice of the accommodation provider. Integrating face recognition as an authentication process makes online transaction more secure. Since there are sundry online payment mode today authentic time face recognition will be a better reliable mode of authentication. We have made utilization of python and library open-cv which has three face recognition algorithms, faces of customers are trained into the machine and stored into the database and accessed when needed. Out of the three algorithms fisher face and Eigen face have less precision and withal depends on background effulgence. Thus LBPH (local binary pattern histogram) is utilized as it gives a higher precision and works on dim light as well. After validating and verifying rest of the customer information authentication is done where the images captured is compared with database and verified for the right utilizer and thus authentication is done. Thus this project aims on implementing the above conception for the betterment in the on demand system.

## Analysis Of Fake Data On Social Media

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**Abstract**— Fake news is continuously spreading through social media. One such forum is Facebook. Identifying the originality of news has been the focus of this research article. In this paper, we are going to propose LSTM based model for the authenticity of the news. We have used ANN for classification. We have made a satisfactory improvement against the methods used before and found the accuracy of our model as 93%.

## A Survey on Detection of Heart Disease

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**Abstract** — Coronary disease is one of the hugest reasons for mortality on the planet today. Expectation of cardiovascular infection is a basic test in the region of clinical information investigation. Among them heart disease are the major reasons for death. Hazard factors like undesirable weight control plans, physical dormancy, smoking propensities, hypertension, high blood cholesterol, unpredictable heartbeat rate, diabetes, dietary patterns, age being a significant help for happening heart infections. Taking in to justification the above-mentioned distressing conditions, this paper is motivated in the Trend of emphasizing of the control and restrictions of previously recommended category strategies referred in the recent literature. In addition, summarizing the literature, the paper also offers a vital valuation of the surveyed literature which reveals novel sides of studies.

**NATURAL  
LANGUAGE  
PROCESSING &  
EMBEDDED  
SYSTEMS**

## Chatbots Technologies And Applications: A Survey

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**Abstract**— Now-a-days there is huge advancement in Human Computer Interaction due to Machine Learning, Artificial Intelligence and Natural Language Processing. Chatbot is one way of interaction between the user (Human) and computer. It is an assistance that communicates with us either through text or voice. It can be developed by using natural language processing which provides the user to interact with the machine to get a solution for the queries. It can be used for many applications, like in the medical field, commercial purpose etc. The biggest challenge in developing chatbot is the QOS by natural language processing in machine learning during training and authenticating the chatbot from the attackers. In this paper, a discussion is presented along with comparative analysis of various chatbot characteristic features as well as their advantages, limitations and assessment of efficiency of the chatbot based on QOS and performance for various applications.

## Experimental Setup for Implementation of Scalar Control for 3 Phase Induction Motor using SVPWM

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**Abstract**— Nowadays about ninety percent of all industrial applications utilize 3 phase induction motor (IM) since they are simple in structure, simple to maintain and are very less expensive. These adjustable speed drives save the energy and many techniques are existed to control speed of the induction motor. In this paper scalar control technique of induction motor is implemented by using Arduino Microcontroller. Scalar control method is a very low cost and very simple method which can be applied to the control systems where speed precision is not that much important, such as pumps, blowers and oil drilling machines. It depends on maintaining constant V/f ratio, just to keep the constant air gap flux. C code was developed to implement open loop V/f control. Arduino microcontroller generates the SVPWM pulses to drive the 6 switches of the inverter circuit.

## Query Completion using Knowledge Graph: A Semantic Approach

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**Abstract**— The completion of the query is the first job of the search engine. Query completion is a process of suggesting a set of words or phrases Semantics is the linguistic study of the meanings in a language. It is concerned with the relationship between words, and phrases. Ontologies can be used to provide formal semantics. In this paper, we create an ontology using Resource Description Framework, where the information is symbolized as a triplet i.e. subject, predicate, and object. Knowledge Graph is a new type of Knowledge Representation. The model will perform query completion using the Knowledge Graph. It is used to infer missing triples by utilizing the existing triples from the ontology. Given the subject, predicate it helps to predict the object, which in turn helps in the completion of the query. There are various graph embedding algorithms like TransE,,ComplEx, DistMult, and HolE. Embeddings are formed for these triplets using the graph embedding algorithms. True triplets that are ranked in the top-N are computed.

## Food Ordering System using IoT enabled RFID reader

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**Abstract**— IoT (Internet of Things) is a giant network of interconnected devices that are used to obtain data from the physical surroundings and share it among the network of connected devices that perform a specified task based on that data. RFID (Radio

Frequency Identification) devices are one of the aforementioned devices that help IoT to obtain user data. Using these technologies as a backbone, our goal is to develop a system that enables its users to order food by themselves and thus constitutes a self-ordering system. In order for us to implement this, we require hardware devices along with efficient software programs. The development of such a system thus can be divided into two steps, i.e. (i) development and integration of hardware required for the system, which includes an Arduino Uno microcomputer, RFID tags, RFID reader, and Wi-Fi (Wireless Fidelity) Module. (ii) Development of software that interacts with the user as well as with the hardware in order to fulfill the requirements of the system. This includes various web development frameworks like react.js, node.js, machine learning algorithm for prediction of estimated time of arrival (ETA) of orders.

## **Traffic Monitoring System with Ambulance Safety**

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**Abstract**— In a country like India, Traffic signals are one of the biggest obstacles in transportation and portage as sometimes these traffic signals are the major cause of traffic. A regular traffic signal operates in a fixed manner which results in non-uniform traffic flow and also overlooks the stalled emergency vehicles like Ambulances. With the increase in traffic density nowadays, several causalities or complications occur due to delay in carrying a patient to the hospitals. The proposed Traffic management system works in such a way that it can reduce traffic to some extent and also clear the path for an emergency vehicle like Ambulance or a fire-engine stuck at traffic signal junction by turning the signal from red to green when these vehicles come in the vicinity of the traffic signal. The above is achieved by the use of RFID Tags, RFID sensors, sound sensors and buzzers. This process is aimed to be automatic and efficient.

## **Smart Helmet Using IoT**

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**Abstract**— Road crashes are growing every day because the bikers don't use helmet. Injuries can also happen. Most of the people choose motorcycles but not the cars as they are less expensive, better to place, convenient to use. There are over three seventy lakh people riding two wheels in our country. While usage is high, the percentage of two-seater crashes is more than the four-seater. Two wheels have higher vehicle accident occurrences than the four wheels. The impact in these incidents is more severe if the rider is engaged in a big speed crash not wearing any protective wear like helmet. Wearing the helmets would also reduce this number of fatalities and can save lives. The project wants to prevent collision as well as to enhancing and detecting of helmet detection unit. The sensor stitched on the helmet synchronizes with the sensor on the motorcycle which ensures that helmet is worn by the motorcyclist.

## **IoT Based Plant Monitoring System Using BLYNK App**

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**Abstract**— This paper outlines state-of-the-art solution for plant monitoring system. The approach towards the solution, uses the concept of Internet of Things (IoT) and BLYNK application which helps us to monitor the plant effectively, so that we can make sure that the plant is taken care of and watered properly when required. In this paper, the implementation approach is designed in an effective manner to send us a notification when the moisture content in the soil of the plant is less and needs watering. Also, provides the details of temperature, humidity, light level and air pressure.

## Home Autonetcs using Internet of Things

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**Abstract**— The aim of this paper is to use a Wi-Fi micro-controller to create an IOT-based home automation system. As the technology rate increases every day, we're putting our technology at the forefront of mobile phones, robots, learning machines, so it's not like our home. Modern homes are increasingly shifting from standard / supported human input devices to remote control via smart / IOT activated devices.

## Multifunctional Defense Robot for Soldiers based on IOT

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**Abstract**— A large portion of the Defense affiliation directly takes the help of robots to do various dangerous occupations that is outlandish by the official. These robots used in Defense are normally used with the consolidated system, including video screens, sensors, laser weapon, metal identifier and cameras. The Defense robots moreover have different shapes according to the explanations behind each robot. Here the new system is proposed with the help of remote camera through we can follow out the interlopers (cloud individuals) and the robot will be used with consolidated structures, including, sensors, gripper and a weapon. Thusly, the proposed structure, and Multi-helpful gatekeeper Robot using remote framework GSM through we can control the robot. This is especially sorted out mechanical structure to spare human life and shield the nation from adversaries.

## Electronic Shoe: To Assist Visually Impaired

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**Abstract**— The greatest things conquered on the earth are not with the eyes, but through the vision built on it. According to the WHO 2019 survey report globally it is estimated that 2.2 billion people suffer from vision impairment or blindness. The rapid growth of the technology which has placed its strongest footprint in every field has played a vital role in assisting the blind people to communicate with the real world independently by voice guidance. In this research “Electronic Shoe to assist visually impaired” that helps in obstacle detection using ultrasonic sensors and water detection using moisture sensors. The webcam captures the text in the image and converts it into speech by using OCR(Optical Character Recognition) algorithm and object identification using YOLO Classifier. Accelerometer is used for recognizing whether the person is in an emergency situation and sends an SMS alert through twilio to the authorized person and GPS in the android application will be utilized for navigation purposes during the emergency situation.

## Iot Design For A Rechargeable System In An Automobile

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**Abstract**—This Paper belongs to a technical field of energy generations and energy utilisation and discloses a system which is able to recharge a battery of an electric car using the IOT technology. For the embodiment of these invention, it consists of a generator to generate the energy, a storage medium to store the generated energy and a monitoring system to monitor the energy that is being stored, the energy that is being generated and energy that is being utilized . The specified monitoring system comprises of various

sensors to collect data. This complex system is centralised based on a Micro-Controller to control and monitor the specified activities.

## Application of Unsupervised algorithm for DWC using IOT

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**Abstract**— Computing and Mechanical advancements today make the science as a part of our life, inducing technology into Agriculture will result in an efficient Agro-product. Our paper intents in designing a sway system for the progression of supplements of hydroponic plants, consequently utilizing Arduino microcontroller and constrained by a System. With the next support of an Arduino UNO R3 microcontroller to naturally control the progression of supplement arrangement with rationale. The sensors like MQ135 gas sensor, DHT22 temperature and humidity sensor, PH and EC sensors are related to Arduino UNO R3 board, is connected with the system. The generated values that are recorded should be stored into the database employing a process called “Data Acquisition”. A comparative report is finished with generated and standard values of plant germination for the improved development of the hydroponic plant.

## Aggregated Controlled Environment for Cultivation

**Adarsh HJ, Akshay.A, Channa Keshava.V, Anju Thimmaiah.M, Raghavendra Nayaka.P**

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**Abstract**— Closed farming system has the upside of shielding the plants from outside brutal conditions and giving appropriate conditions to plant development; it can viably improve the harvest yield. In any case, the conventional checking and control costs a great deal and the control interface isn't friendly and they are based on manual technology. With the coming of the distributed computing and ease Internet-of-Things frameworks, we can apply these ease and powerful advancements to monitor the closed farming conditions, plant development and control the closed farming environment conditions By monitoring the surrounding environment in Real time the data obtained from the sensors can be analyzed and can be used to improve the cultivation of a specific crops. In this framework a low cost closed farming monitoring system is being implemented for medium sized areas. With AWS, Crate Db, Raspberry pi 4, Apache Kafka, and Flink, we build up a proficient and very effective framework to accomplish the above objectives.

## Health Care Chatbot Assistant system

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**Abstract**— This paper tells about the importance of the algorithms that are used in developing the health care Chatbot system as it very essential. Rasa stack consists of many open source AI apparatuses solely utilized in plan to make a logical chatbot. It consists of incredible APIs and inserted together with Rasa stack which incorporates Rasa center and Rasa Natural language understanding. It incorporates the sack of words calculation helping in streamlining portrayl utilized in the NLP, Conditional random Field utilized in measurable displaying and AI stages and furthermore trend setting innovation. The proposed framework is to make an option in contrast to this ordinary strategy for visiting a clinic and making a meeting with a specialist to get analysis. From the user queries chatbot will, predicts the infection and prescribes treatment along with necessary medicine. It like wise support the utilization of this RASA stage for the client specific format according to their prerequisites and furthermore elevates in building up the system for better efficiency.

## Android Learning App Using Augmented Reality

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**Abstract**— Augmented Reality is one of the emerging technologies which will be making a serious impact on the industries of the world. Augmented Reality is not a science fiction concept anymore it has become a science-based realism. With Augmented Reality we can view a digital object coexisted with a real object in our realworld environment in real-time. Due to the improvement of the mobile computing power in recent years Augmented Reality can now be accessible on mobile devices as it no longer requires specialized equipment. Although Augmented Reality is still in its early phases, it is already implemented being used in a variety of different fields. One of the major fields is Education. Education is one of the key organizations that is being used by technology and digitalization such as demonstrating complex subjects which can make it easier for the students to understand. As students tend to use technology for learning rather than reading bulky books. Many young people now have smart phones which we can utilize this technology to enhance our learning methods. As our project's aim is to a mobile application that uses the concept of AR as its base to build a learning platform that will help students to achieve an understanding of what they study in a more fun, innovative and immersive way.

## Election Voting Using SMS

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**Abstract**— Voting in general, is an essential and necessary activity that is implemented in various different sectors and levels of society, ranging from national level (government elections) to the more basic selection of class monitor in schools. All the tasks of selecting a leader/representative are mostly accomplished with the help of voting as it requires the consensus of all the people involved in the activity. But voting can be a tedious procedure and the motive of this project in general is to resolve this issue by conducting a voting session with the help of an Android/Web based application to make it easier to access and conduct the voting procedure. An application like this helps digitizing the traditional voting system and thus helps in overcoming the possibility of fraudulent voting helping in the conduction of a fair and reliable voting session. We hope to accomplish this by the use of Firebase, in which we allocate each member participating in the voting with a distinct ID corresponding to their phone number, so that no violations are made during the process. The use of such system can efficiently be used to increase the vote count and completely mobilize and digitize the voting mechanism.

## Refit Reva

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**Abstract**- The purpose of the student feedback system is to automate the current manual system with the aid of computerized equipment and full-fledged computer software, completely compliant with their specifications, so that their valuable information can be stored with easy access and manipulation for a longer period of time. The required hardware and software are easily available and easy to use. Student feedback system can lead to a consistent and fast management system as described above. It will help the consumer focus on their other tasks, rather than concentrating on record-keeping. Therefore, it will help companies make better use of capital. Through duplicate entries the organization should create a computerized record. The aim is to automate their current manual system by using computerized equipment and full-fledged computer software to fulfill their requirements so that their valuable data can be stored with easy access and manipulation for a longer period of time.

## Kannada Kali

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**Abstract** — This project is an Application to make a user understand and learn the basics of a language. Kannada Kali focuses on the 4 main aspects of language learning: Listening, Reading, Speaking and Writing. While a child learns, detecting real word error is a really difficult task and requires advanced statistical processing, Data Mining and Natural Language Processing (NLP) techniques which we have implemented in this project.

## Vivify: Driver's Drowsiness Detection and Alarming System

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**Abstract** — The system is Cross-Platform Mobile Application using Face Detection with Machine learning detecting fatigue of driver, which will help in preventing road mishaps. Every year road accidents due to human error cause an increasing amount of deaths and injuries globally. Driver's drowsiness is recognized as an important factor in vehicle accidents. Preventing drowsiness among drivers is a necessity to get an accurate result about the driver's fatigue level and provide a warning to the driver to help them avoid drowsiness and ensure safe driving not only for them but also for others who are in the vicinity of the vehicle area while driving. This app offers a method for scanning the facial landmarks and after detecting the face use the required landmarks for eye tracking. This will allow the vehicle to be in complete control of the driver. The system uses the front camera of the mobile phone that points towards the driver's face or the dashboard camera and monitors the driver's face to detect fatigue. In case, the drowsiness is detected an alarm is used to warn the driver and the alarm is then switched off manually with an idea that the alarm will be providing an alert until the driver is wakeful. For this purpose, a deactivation button will be used to deactivate the alert or alarm. There will be more features in the system such as sending SOS if something happens to a vehicle at an isolated place. The app also provides helpline numbers, in case of any emergency situation the driver can contact the required authorities as and when required. The app comes with a detailed list of road safety measures to remind the driver about the rules and regulations to be followed for a safe ride. Vivify can also be used for navigation purposes using the map feature in the app. Flutter will be used for a native and user-friendly interface of the system. This will allow the app to be available for both android as well as IOS devices. Minimal use of the hardware will ensure smooth processing. This system can be used for different scenarios like for cab services, on-road cargo service, and late-night travelers.

## Blood Bank Information Using Andriod Application

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**Abstract** — Availability of blood throughout the duration of emergencies is highly important for each single physical thing. There are various E-blood donation banks for effective communication between them and hospital facilities. None of the E-blood donation bank gives the instant contact amongst beneficiary. This is the real drawback of the cutting-edge framework. The present frameworks are tiresome; require greater exertions and expensive. The given paper offers a interrelationship between blood bank framework and additional appropriate framework to boost the performance. The new issues could boom the efficacy of present-day blood banks and assist to upgrade from regular computing device framework to transportable framework. The planned task additional examine the additives of greater applicable framework in diverse context which includes the report being stored, records for future programs like type of blood agencies being donated and bought with the aid of the individuals. To use GPS service for locating the hospitals, blood banks & volunteer donors to know if the seeker is near to or not.

# MACHINE LEARNING

## An Approach to Animal Face Identification and Classification System using CNN

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**Abstract**— The Proposed work gives a significant contribution to classification and identification of animal faces in the low-resolution images using most commonly and widely used neural network system. We have adopted Convolutional Neural Network (CNN), which gives promising results in classifying the images using neural network system. CNN helps to extract features of animal faces automatically, also helps to learn and classify them. For the proposed work, we have used the CIFAR-10 dataset (Canadian Institute For Advanced Research), more than 6000 images are used to identify and classify the animal faces. Comparing to other classification techniques, CNN is progressive method to extract features and classify dynamically, where as other conventional algorithms were hand-engineered which means programmer has to extract the features from the dataset explicitly. In our work, we have gained 92% accuracy in identifying and classification of the animal faces for low-resolution images.

## Evaluation of K-Means and CNN architectures for segmentation of Brain Tumor

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**Abstract**— A Brain that is accumulated with anomalistic group of cells is tumor and this tumor can be present in any part of the brain. Tumors are consolidated and are of distinct shapes and sizes. Tumors can be fatal and non-fatal. Non-fatal tumors are basically known as primary brain tumors which is originated in your brain, technically known as Benign. Fatal tumors are known as secondary brain tumors which occurs due to deadly cells that diffuse/disperse into the brain which is scientifically called as metastatic brain tumors. There are different techniques for brain tumor segmentation, Deep Learning is one among them and it provides better results when compared to other techniques. This article provides/presents K-Means, CNN (LeNet, UNet) architectures to segment brain tumor using MRI images. Kaggle datasets has been used for our work which comprises of multiple images. This proposed network shows the comparision of different architectures and disclose the best architecture that is accurate.

## Brain Tumor Segmentation Using Machine Learning

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**Abstract**— Among the brain tumors, glioblastoma is one of the most dangerous brain tumor that can lead to a very short life expectancy. MRI (Magnetic Resonance Imaging) is a widely used imaging technique to locate such tumors but the amount of data produced by MRI is huge which makes manual segmentation a very tedious task. Because of this, automatic methods are required but the variation in the structure and location of such tumors makes automatic segmentation a very challenging task. In this paper, we have proposed different algorithms of machine learning like KNN (k-nearest neighbor), watershed algorithm, and canny edge detection for extracting patches which can easily overcome this challenge. This would not only be used to detect the exact location of brain tumor but will also predict the patient's life-span.

## **Spam Detection using Machine Learning**

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**Abstract**— As every single organization in recent days have nearness in online method of showcasing every product and selling it by online platforms. This prompts the significance of online audits on the Internet. For buying a specific product on online platforms, each individual need to rely upon online surveys. Online surveys given by clients with respect to a specific item may not be constantly genuine. A few organizations just as people manipulate the surveys to advance a particular item and downgrade its rivals. In this specific work it has been attempted our best to analyze the overall issues for detection of non genuine audits and a system has been proposed to manage counterfeit audits.

## **Localization of Eyes Using Haar Cascade Classifiers**

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**Abstract** — When it comes to image processing, a system or an algorithm designed to process an image cannot work with an image in its raw format. Image pre-processing plays an important role in transforming or encoding an image in a form that can be comprehended by the algorithm/system. This may include extraction of certain features or combining features to transform the image into a desirable format. One of the most essential pre-processing tasks is the localization of objects/areas of interest in an image. Localization focuses on detecting only the parts of the image that are to be processed while ignoring the rest of the image. This paper describes an effective method in localizing the eye region from an image which contains the upper region of a human face. The dataset used to perform localization of the eye region is the second subset of the CASIA-Iris-Mobile-V1.0. It is done using a combination of various Haar Cascade classifiers.

## **Emotion Based Music Recommendation System**

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**Abstract**— This paper demonstrates the Bezier- approximation technique as a facial expression recognition method. The system is predicated on facial expression choices, faces pure mathematics knowledge, and approximated by Bezier curves of third order representing the relation between feature motion and expression changes. For face detection, color segmentation has been used to help the novel Fuzzy classification plan which manipulates color ambiguity. The experimental findings indicate that the facial expressions with Associate in nursing accuracy of 90 cases are recognized by this technique. Finally, a manipulator golem and face gesture commands were used to execute the System. We have a propensity to split in three regions from the external part of the body, namely the left eye, the right eye and the mouth. Facial identification first comes so that a skin layer is identified. We prefer to maintain the face skin region and attach the wide area of the skin to the outside body area of the skin.

## Stock Market Forecasting

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**Abstract**— Forecasting stock market prices has been a topic of interest lately, especially, among the researchers and the analysts. But forecasting/predicting stock prices does not come in handy as it is a pretty complex task. The stock market is a highly volatile concept as it is affected by a number of factors viz. Previous performance of the stocks, political and economical factors, investor's sentiment, changes in leadership, etc. It has been seen over the years that historical data and previous performances of the stocks have been inefficient in forecasting the accurate behaviour of the stock. Existing studies focusing in or around stock market forecasting, focuses on only one aspect/parameter i.e. Historical Data/Previous Performance. There are many algorithms out there in the field of machine learning, among which, a few can even generate an excellent accuracy rate. But, even though the accuracy rate is high, one cannot be completely certain that he/she can invest based on only one behaviour of the stock market. Sentiment analysis can play a huge part here. Using the sentiment analysis on the tweets collected using the Twitter API and the closing value of various stocks, one can build a handy system that can forecast the stock price movement of various companies 1, 5, 10, 30 and 60 days in prior. This paper is based on the above mentioned methodologies and generates a decent accuracy rate which can be further worked upon for more improved results.

## Fake News Identification System

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**Abstract** — Nowadays, there is a huge surge in data, this results in a decrease in information precision on the Internet. Especially in the social media sphere and other platforms, there is a rapid exchange of data between multiple hands. This raises an important concern. Fake news detection is an important, yet very challenging topic. Traditional methods using lexical features have only very limited success. In this paper, we propose a method to gauge the authenticity of such information using only a few attributes of a news with a simple user interface. Along with it, the application will also contain day-to-day important news. All these together will help in keeping the credibility and integrity of the information intact and steer us towards a safer community.

## Detection Of Cyberattack In Network Using Machine Learning Techniques

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**Abstract**—Contrasted with the past, improvements in PC and correspondence innovations have given broad and propelled changes. The use of new innovations give incredible advantages to people, organizations, and governments, be that as it may, messes some up against them. For instance, the protection of significant data, security of put away information stages, accessibility of information and so forth. Contingent upon these issues, digital fear based oppression is one of the most significant issues in this day and age. Digital fear, which made a great deal of issues people and establishments, has arrived at a level that could undermine open and nation security by different gatherings, for example, criminal association, proficient people and digital activists. Along these lines, Intrusion Detection Systems (IDS) has been created to maintain a strategic distance from digital assaults. Right now, learning the bolster support vector machine (SVM) calculations were utilized to recognize port sweep endeavors dependent on the new CICIDS2017 dataset with 97.80%, 69.79% precision rates were accomplished individually. Rather than SVM we can introduce some other algorithms like random forest, CNN, ANN where these algorithms can acquire accuracies like SVM – 93.29, CNN – 63.52, Random Forest – 99.93, ANN – 99.11.

## Credit Risk Analysis

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**Abstract**— The several techniques for credit scoring were used to create credit score cards Due to its desirable features (robustness and transparency) logistic regression model is among them the most widely used in the banking industry. Although some modern techniques (support vector machine) were applied to credit scoring and showed superior predictive accuracy, they have problems with interpretability of the results. Therefore, Those specialized methods were not commonly used in practice. Logistic regression with random coefficients is suggested to improve predictive accuracy of logistical regression. The proposed model will boost logistic regression prediction accuracy without sacrificing desirable features. The proposed method of developing the credit scorecard is expected to lead to successful credit risk management in practice.

## Hyperspectral Satellite Image Classification Using Deep Learning

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**Abstract**— Hyperspectral images are utilized to provide adequate spectral information so as to acknowledge and differentiate spectrally distinctive materials. Optical analysis techniques are utilized to detect and identify the objects from a scale of images. Hyperspectral imaging technique is one among them. Hyperspectral image classification research is an intense field of study and an outsized number of recent approaches have been developed to enhance the performance for specific applications that exploit both spatial and spectral image content. The goal of hyperspectral imaging is to obtain the spectrum for each and every pixel within the image of a scene, with the intent of detecting processes, identifying materials or finding objects. In this particular study, a strategy for the classification of Hyperspectral satellite images is asserted using deep learning framework. This framework involves inception module architecture containing 1x1, 3x3 and 5x5Convolutional layers which gives an overall classification accuracy of 97.30%.

## A System To Exude Undesirable Messages From Osn Utilizing Rule Based System

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**Abstract**— One of the major issues in the current Online Social Networks (OSNs) is to give clients their responsibility for messages being controlled and their web-based social networking walls. Currently the online Social Network provide less support to overcome this drawback we propose a system allowing the Online Social Network users to have possession on the messages posted on their homepage. This is achieved utilizing a standard based framework which permits clients to modify their filtering criteria and which can be applied on their walls.

## Deep Learning for Age Classification using Facial Image

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**Abstract**— The convolutional neural network has become prominent to address several advanced issues within a real-world entity. The challenges like data accessibility on certain websites needs the user to be older than a particular age and restricting young children to access inappropriate games/websites are still demanding appropriate technological solutions. Current technology doesn't recognize the end user's age before granting access to websites and it allows access to websites based on the information given by the user. Hence to overcome these issues, the proposed system is developed for age classification using facial image. The services

provided by a number of the websites needs the end users to be older than some age however the strategies they implement don't seem to be effective enough to determine their age and gender. This work can predict the age of an individual based on facial feature extraction and analysis. The trained model is used in android application to capture the image of the user when accessing a webpage or an application and classify them as adult or child. This method provides an intermediate phase between the websites and the end users in determining whether or not the user has the right to access the service.

## **Deep Learning based Grammar Checker For Kannada**

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**Abstract**— Language is the most basic and natural means of communication in the present day to day presiding. To understand and infer the communication laid out is crucial and to a Human this is a novice task as we are trained from years with a dataset of decades by an exception computing processor as our brain. But to incorporate such understanding to a machine, to be able to evaluate and differentiate contextual information into proper grammatical form is also equally important in the present day. This project proposes development of such grammar checker for the Dravidian language Kannada. The complexity of the language poses a challenge and using a rule based approach although allows to identify flagged errors efficiently. It requires a linguistic expert to draw out hundreds of sequential rules that is complex to maintain. This project proposes to use a deep learning approach to train a LSTM neural model over a large data set to achieve the required classification , using TensorFlow and Keras packages.

## **Prediction Of Heart Diseases In Diabetic Patients**

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**Abstract** — In today's world we observe that a large group of people are affected with diseases like Diabetes, Cancer, Heart related issues, etc. Due to which a substantial amount of raw data is being collected in the medical industry. In this paper we aim to convert these raw data into structured data using machine learning techniques in order to predict heart disease in diabetic patients. In this research we have developed an automated intelligent system to predict heart disease using various data mining techniques such as Decision Tree, Logistic Regression, K nearest neighbor (Knn), Hybrid Algorithm and Random Forest. These data mining techniques on implementation provide us with a higher accuracy rate which is the primary requirement for better prediction of heart diseases in diabetic patients. The datasets used for this research is obtained from PIDD (PIMA Indians Diabetic Database). These datasets contain a number of instances with a set of attributes such as age, sex, blood sugar level, cholesterol etc. This system is developed to be User friendly by reducing the possibility of human errors and the time consumed

## **Automatic Attendance System for Using Face Recognition Based on Deep Learning**

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**Abstract**—Student participation is fundamental in the learning procedure. To record participation, a few different ways should be possible; one of them is through student marks. The procedure has a few weaknesses, for example, requiring quite a while to make attendance; the attendance paper is lost; the organization must enter participation information individually into the PC. In the existing technology or method(LBPH). It is having lot of demerits like it is difficult for the computer to do the face identification when the poses of the probe are different. Due to other objects or accessories (e.g., sunglasses, scarf, etc.) performance of face recognition algorithms gets affected. To beat this, the paper proposed an understudy participation framework that utilizes face acknowledgment. In the proposed framework, Convolutional Neural Network (CNN) is utilized to distinguish faces in images, profound measurement learning is utilized to create facial implanting, and K-NN is utilized to group understudy's countenances. In this manner, the PC can perceive faces. From the tests led, the framework had the option to perceive the essences of understudies who did join in and their participation information was naturally spared. For proposed CNN we have obtained a best recognition accuracy of 98.3 %. The proposed method based on CNN outperforms the state of the art methods.

## An Efficient Deep Learning Approach for Pneumonia Detection

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**Abstract** — Pneumonia is a form of acute respiratory tract infection(ARTI) that affects the lungs which is caused by bacteria, viruses or fungi. Pneumonia is the leading disease that occurs more in children of age below 5 years. Every year almost 7,00,000 children are victimised for this disease. Hence, the accurate diagnosis of such a disease is of high importance. So, the expert radiologists role is crucial to identify the disease through chest x-ray images. But, in certain situations the doctors fail or there are no expert radiologists available in developing countries. There is a requirement of a software based support system to detect Pneumonia using Chest X-ray images to provide early diagnosis for the infected person. So, the aim of this project is to develop a software system to detect the disease Pneumonia using Chest x-ray images. This is achieved by using multiple convolutional neural network layers where the chest x-ray images are tested, trained and validated. The inception v3 model is a CNN which is 48 layers deep and is used to extract the high level features from the images. The test result obtained showed that the software is classifying the infected and non infected images. As a result, this project has reached the accuracy of 85% in detecting the disease from chest x-ray images.

## Student Academic Performance Prediction Using Machine Learning

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**Abstract** — Every educational institution around the world maintain student result database which contains information about student marks, grade in different subjects in different semesters. This project is used for evaluating students' performance and predicting their scores. The programming language that will support, interface and help in building our project is Python. Data mining and machine learning are growing fast in areas of computer science with far-reaching applications. Machine learning in general means performing a specific task without using explicit instructions by humans, relying on patterns and inference to detect meaningful patterns and predicting.

## Smart Circuit for Home Automation with Integrated Machine Learning

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**Abstract** — This paper tells us the importance of Machine learning based home automation that will analyze the user behavior or pattern and predict the timings of the devices being used by the user, the data obtained by the Machine learning will be used to turn on and off the modules automatically without the user interference. By this system it avoids manual on and off procedures and can be controlled by using mobile phone. In our paper we are developing a hardware which is going to make the existing traditional circuit with non-smart devices (like Bulbs, Fans, Tube Lights, Air conditioner etc.) work as a smart device. Also it consists of various sensors which will give real-time picture of particular room.

## Smart Traffic Controller Using Machine Learning

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**Abstract** — Traffic signals play a vital role in managing vehicular traffic, which can lead to severe congestions if mismanaged. It is designed to improve the efficiency and the effectiveness of the pre-existing system which is managed by traffic wardens. The system will be able to manage traffic independently, ensuring that there is a free flow of traffic at all times of the day. It employs two basic components, namely OpenCV which is a computer vision library which primarily deals with the video-source and preprocessing, followed by which, the feed is processed by TensorFlow Object Detection API, which detects the number of cars in a given frame of video. The system then determines the density of traffic at a given intersection and grants the signal which can clear maximum traffic for a given point in time. Implementation of such a system not only reduces the traffic by a large extent but also reduces the manpower required to manage the intersections. Thus, the implementation of an automated system is the need of the hour to ensure that the rising traffic density is effectively managed.

## Kannada Character Recognition Using Convolutional Neural Network

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**Abstract** — Character recognition of reading handwritten alphabets in regional languages is a complex problem and needs machine learning for solving the problem effectively. There are multiple machine learning algorithms proposed to read the characters and deep learning approach, Convolutional Neural Network is one among them. In the work proposed we build a character recognition system for recognizing kannada alphabets. We have trained our model using our own dataset and trained model was tested with the test image. The model achieves 93% accuracy in recognizing kannada alphabets.

## The Effect Of User-Generated Content Factors On Improvement: Usability For E-Commerce In Context Of Bangladesh

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**Abstract**— Context: Usability is a key success of any e-commerce development. Usability of a software system means its relaunch software with system productivity, reliability, satisfaction and high quality of e-commerce. Human strongly encourage and market place is needed usable system to touch fast growing e-commerce. Unfortunately, usability of e-commerce in Bangladesh it is falling and running situation.

## Object Detection using Deep Learning Techniques

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**Abstract**— This Object Detection Project deals with the identifying of the object in an image (Or Video which is just a bunch of Moving images) provided as an input. Object detection has multiple applications such as face detection, vehicle detection, pedestrian counting, self-driving cars, security systems, etc. The application will be using Tensorflow along with Keras developed by Google. The base language used for development and deployment is Python and C++ tested on Linux. The algorithm to be used in our

project for Object detection and classification is YOLOv3 using Nvidia's CUDA. YOLO is an accurate model which divides images into regions and predicts bounding boxes and probabilities for each region.

## **New Approach to Sentiment Polarity Detection by Using ML Techniques**

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**Abstract**— Sentiment analysis (SA) is a process of extracting the user's feelings, emotions and verifying whether a user-generated text expresses neutral, positive or negative opinion about a product, people, topic or an event. The development of internet based applications has directed enormous measure of customized surveys for different related data on the Web. These reviews can be collected from various sources such as social media, social network, Wiki, forums, blogs, news and websites. As a result of the growing number of customer reviews, finding appropriate customer reviews will play important rule in reducing information overload. Sentiment Analysis is considered as one of the useful tool for users to extract the required data, as well as to aggregate the collective sentiments of the reviews. Because of rapid development of social media and Internet technologies, sentiment analysis has turned into an essential opinion mining technique. There are three noteworthy systems being utilized for sentiment analysis; Machine learning, dictionary based, and rule-based methodology. Each individual method is having some limitations. So in order to overcome these limitations in this paper we proposes an integrated framework which combines the above methods to achieve better scalability and accuracy.

## **Yolo Based Realtime Forest Fire Detection**

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**Abstract** — Forest fires are very hazardous and cannot be ignored knowing the fact that they have the potential to tear down the balance between flora and fauna in the distant future. In this paper the discussion related to a popular model based on AI i.e. YOLO (You Only Look Once), used for the detection of the fire outbreaks those which mainly involve Wildfires is put together. To generalize, the power of AI is incorporated to detect and help in taking early precautions from the immense damage that could be caused by the wildfire outbreaks. The paper begins with introduction initially comprising with history of fire outbreak incidents, causes and its after effects. The literature survey references lead to deep understanding of previous models and its limitations which are key points for further enhancements. Our outline work has been explained in phases: dataset pre-processing, environment setup and YOLOv3 model training and validation. By exploiting YOLOv3 this paper proposes an algorithm which is capable of detecting real time scenario which in our case is forest fire with required precision.

## **Fake News Detection And Flagging**

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**Abstract**— False or fake news is a type of gutter press or disinformation, according to Wikipedia, consisting of deliberate misinformation or farce propagating by mainstream press, internet dissemination and online social networks. The fake news of these days is causing various issues in some media from satirical posts to a fabricated news and government propaganda program. False news and lack of media confidence are rising issues in our culture, with major repercussions. Obviously, "fake news" is a purposely deceptive story, but lately blurring the dialogue on social media is changing its meaning. Some of them are now using the word to discard the evidence about their desired viewpoints. To separate fake news from what is real fact is necessary in today's world. Hence, we are going to employ our algorithm so that we can identify and distinguish between what news is fake and what is real.

## Predictive Human Heart Anomaly Detector

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**Abstract** — Cardiovascular diseases (CVDs), commonly known as heart attack or strokes are the number 1 cause of death globally, taking an estimated 17.9 million lives each year, accounting to about 31% of total deaths across the world every year, according to the World Health Organization. One of the primary reasons behind CVD is hyper homocysteine, that is higher level of an amino acid name homocysteine, causing blood clots in the arteries which results in a heart attack. This work proposes a novel system to detect homocysteine level in a non-invasive way through detection of hypothyroid as well as Vitamin B-12 deficiency. Neural networks have been used in this predictive model with an accuracy of 80%.

## Facial Expression Recognition and Gender Detection using CNN

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**Abstract** — The very popular method for Facial Recognition and Classification is Deep Learning. There are different types of deep learning algorithms such as Deep Belief Network (DBN) and Convolutional Neural Network (CNN). In this paper we present a new architecture network based on CNN for building a facial recognizer model which detects the emotion and gender of a person in real-time and classify accordingly. We will be using Convolution Neural Network to implement this model which is the best algorithm for Facial Emotion Recognition (FER) and Gender Detection. To evaluate our network architecture we will test the model with large databases that are publicly available. Obtained results show that the CNN approach is an effective expression and gender detection model.

## Making the Vehicle (CAR) Navigate in Traffic by Avoiding Collisions using Deep Learning

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**Abstract** — Deep learning (DL) which is subset of Machine learning (ML) along with Transfer-learning (TL) can significantly help vehicles (car's) to achieve human- level ability to safely navigate in unpredictable dynamic environments, but in order to develop an autonomous vehicle we need lots of training data and obtaining data from real world using a car is a complicated task as it is time consuming to set up everything, as it requires high end cameras along with humongous amount of time in gathering the data, further it's not very safe and it's less convenient, so let's try developing an autonomous vehicle using a game which will be able to navigate safely by avoiding collisions as much as possible here we are using a game to build an autonomous vehicle because it's very easy to setup everything ,a gaming environment is much similar to that of a real-world environment.

## An early prediction of Parkinson's disease using Machine Learning techniques

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**Abstract** — Machine Learning has transformed Healthcare Domain providing more efficient, faster, smarter ways to detect and cure various diseases. Machine learning approaches are widely used for Parkinson's disease (PD) prediction. The prediction of Parkinson's disease challenging for doctors and researchers as the symptoms of the disease are examined in middle and later middle ages where condition has progressed over time. In this paper, we will build a predictive model which can be used for early and accurate detection of the presence of Parkinson's disease in one's body. We focused on XGBoost, a new Machine Learning algorithm, based on decision trees, designed with speed and performance in mind, to improve the accuracy of PD prediction. This

approach using the XGBoost algorithm obtained higher accuracy than other machine learning techniques such as Naïve Bayes algorithm, binary logistic regression, random forest and support vector machine.

## **Student grading system using Machine Learning**

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**Abstract** — The student's overall achievement and their pass rates shows the way of coaching given by the college system, this is vital improving the students pass rates and decrease failure rates. Researchers have used two algorithms in which are Decision tree (DT) algorithm and Support Vector Machine (SVM) algorithm in order to search the necessary student characteristics and conclude the student pass rates, but researchers do not forget about the capabilities of student dependency and coefficient of initialization. Therefore, if we look into this study, student grade prediction the use of DT and SVM. The capabilities are taken into consideration to be crucial is this study, we apply improved genetic algorithm to handle best function choice problem. Then device gaining knowledge of algorithm is applied. The results display the test can achieve higher accuracy of prediction. This study is used to help the students who are lagging behind the studies and facing some risks of graduating.

## **Personality Analysis Using Naïve Bayes Classifier**

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**Abstract** — In this project we aim to recognize editable text document and perform personality analysis. Words can be classified into different classes based on the relevance with topic searched. This project contains naïve Bayes classifier which uses movie review dataset for positive and Negative word classification. The paper aims to helps understanding the best classifier for text classification. Further to ensure realtime computation .NLTK is used for language processing and naïve Bayes for text classification .The existing systems is based on predictions and helpful in personality analysis based on the words used by the user and predict person is positive minded or negative minded.

## **Detection of Fraudulent Behavior in Water Consumption using ARIMA Model**

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**Abstract** – Companies that supply water face numerous issues when customers deceit the organization by involving in fraudulent activities. It is a challenging task for the company to figure out the culprit. There has been constant research going on to resolve the issue, and here we stress upon a more profound level to support the companies. So, this particular model assists in finding out the behaviour of the customers. The research focuses principally on forecasting techniques where an algorithm called ARIMA is used to detect the behaviour. By applying this time series algorithm, it exhibits accurate results and improves efficiency, thereby improving the revenue and reducing the non-technical loss of the company.

## Handwriting Text Recognition using CNN

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**Abstract** — Handwritten Text Recognition (HTR) is demanding research in the area of Image processing. Presently numerous recognition techniques are well-known for recognition of handwritten English characters. The impact on handwriting can be seen in most of the modern computer and communication technologies like fax machines, word processors and email, etc. Throughout this survey, converting a language appointed in its abstraction kind of graphical representation to symbolic representation is taken into account as handwriting recognition. The initial and the most important stages for building any handwritten recognition system are pre-processing, segmentation and feature extraction. Handwriting is challenging to recognize due to differences in size and shape of the alphabets of the language, angle of handwritten text. A variety of recognition technologies for handwritten English alphabets are conferred here.

## AAA(All About Agriculture)

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**Abstract** — “AAA[All About Agriculture]” is an online dialogue forum which was created using Java's programming language with Oracle as the framework database. The paper is useful for farmers and growers to know about the various crops, the use of fertilizers for these crops, the soil conditions under which these crops perform best and the correct climate and environmental variables for these crops. This is an online dialogue which provides solutions for smallholder rancher and scholars of agriculture. It includes soil analyzes for both nations, with guidance about what to use and how many fertilizers? And what plant, herb or vegetable to grow in what season and when? This also helps make competition and better selling choices. This agriculture database is more helpful to the local ranchers as this app is built for the ranchers which is farmer friendly as it does not require any login credentials, as it consists of only username and password. So, the ranchers need not be computer literate. Ex: Broccoli, Cabbage, potatoes in Early spring. Beans, Cucumber, Okra in Summer Carrots, Radish in Rainfall.

## Crime Scene Detection In Video Surveillance

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**Abstract** — Among the real-time applications that are present, one of the challenging task is the tracking of the target in low resolution video as there will be loss of discriminatory information in the visual appearance of the objects that are moving. Approaches that are already existing are mostly based on the development of a LR (low resolution) video along with the high resolution techniques. But they are the methods that require high costs for competition and this cost will continue to rise while dealing with more events. So through this paper an algorithm is introduced that can detect unusual event without making the type of conversions as above and is most suitable for the development of security systems for ATM where standard low-speed camera is used as they are of low cost.

## Complex Human Activity Recognition using Deep Learning Techniques

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**Abstract** — We presented a deep learning model dependent in the mix of establishing Neural Network and repetitive neural system. The type sources of info the waveform information of multiple channel sensors start to finish. Multiple proportional

highlights are removed by establishing like modules with utilizing different portion based complexity layers. Joined with GRU, displaying for time arrangement highlights is acknowledged, utilizing information attributes to finish classification undertakings. Through exploratory verification of most broadly utilized open HAR datasets, our presented technique shows reliable unrivaled execution and has great speculation execution.

## **Cardiovascular Disease Prediction using Machine Learning**

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**Abstract**— Throughout world wide the main cause of death is happening due to heart attacks and this costs millions of deaths and threat to life. Data mining techniques have the advantage of less human intervention and it is also cost effective while the clinical parameters has to undergo many procedures. The significance of using data mining or machine learning techniques is that they give precise output. The study is made under supervised classification techniques Bayesian and logistic regression. The proposed web application is user interactive and helps in the medical field mainly in laboratories which incorporates the developed model and predicts the threat of heart disease in an easier and cost effective way. The outcome of the proposed model predicts the accuracy of the classifier and application proposed will predict if a person is chronic to Heart disease.

## **Automatic Detection of Diabetic Retinopathy using retinal fundus images implementing MachinSe learning algorithms**

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**Abstract**—Diabetic retinopathy is one of the leading causes of loss of vision that has affected approximately 93 million people. An analysis considering 35 studies, all across the world, estimated that the global figure of DR among diabetes patients is in the range of 7.62%–47.1%. If Diabetic retinopathy is not identified in an initial stage, it can cause serious vision problems such as vitreous hemorrhage, retinal detachment, glaucoma, and even permanent total blindness. Currently, it is detected by trained ophthalmologists and examining and evaluating the fundus photographs require a lot of time. This leads to delayed follow-ups and hence delayed treatment. Since we are aware that the population increases every day and so does the number of diabetic patients, the current infrastructure and manual method are insufficient. Thus there is a requirement for automatic and effective diabetic retinopathy detection. There have been previous attempts made at this and have even provided good progress with the classification and pattern recognition in the image and machine learning, we still require a method that can have potential as close as to the realistic clinical examination method. So in this paper, we have proposed a prompt method to detect diabetic retinopathy using retinal fundus images. Our model makes the prediction whether a person has diabetic retinopathy using Support Vector Machine with radial basis function (SVM-rbf) and also with the help of K-Nearest Neighbors (KNN) which are machine learning algorithms and we received an accuracy of about 96.62% and 94.38% using SVM-rbf and KNN respectively.

## **Detection Of Brain Tumor**

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**Abstract**— Brain tumor is cancerous or non-cancerous growth of abnormal cells within the brain. Brain tumor detection could be a very challenging and tedious job. So as to detect the brain tumor within the patients MRI images are used. This project aims at detecting brain tumor using one of the deep learning algorithm namely convolutional neural network. The implementation ends up in efficient performance in detecting the brain tumor and help the doctors to produce the proper diagnosis to the patients at the sooner stages.

## Machine Learning based Phishing Website Detection

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**Abstract**— Phishing is a technique to obtain or exploit the personal information of an individual by imitating an existing website or by offering interesting schemes through email, text messages. Phishers steal important and secured information like passwords, credit card details, phone numbers. Nowadays phishing attacks are increasing which is extremely problematic for social and economic websites. The prime focus of the paper is to build a powerful application that applies Machine Learning techniques and tools to identify phishing websites. Training with one classification model is not the best way in the case of predicting websites because accuracy plays an important role. Therefore, we consider various Machine Learning algorithms such as Random Forest(RF), Logistic Regression model(LR), Support Vector Machine(SVM) or maximum-margin classifier, Decision Tree(DT), Sequential Multilayer Perceptron(MLP), Naïve Bayes(NB). After reviewing each algorithm we select a classification model with the highest accuracy to detect new fake websites given by the user.

## Detection of Different Degrees of Skin Burn Using YOLOv3

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**Abstract**— A skin burn is an injury, cellular tissue damage and protein denaturation caused by heat, electricity, chemicals or sunlight. These skin burns are defined by the area they cover and how deep they are. The burn degree is determined by the number of skin layers affected. A large injury may have areas with different depths. In this paper we use convolutional neural network, YOLOv3 to detect different degrees of skin burn. Experimental result shows that our state-of-the-art model, YOLOv3 yielded an incremental accuracy of 86% which is trained on approximately 1400 images compared to SVM and MDS based models and the tested with 24 test images. Also, in webcam live capturing we obtained an average frame per second of 16.7 with NVIDIA 1050.

## Prediction of Crop Yield and its Diseases by using Machine Learning Techniques

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**Abstract**— Plants are the major sources of food for human survival as well as making medicines. Organic farming is the best agriculture method for yielding healthy plants. Although, Organic farming is such cropping technique that can be used only if plants are free from attack of insects. But insects easily attack medicinal plants and destroy their chlorophyll which induce disease in plants. This make plants lose their medicinal properties. To solve this issue our project work mainly focuses on identifying the medicinal leaf is affected by the disease or not and to predict the crop yield. It is done using machine learning. Configuring this algorithm is very simple that can be implemented for detection of disease in all types of medicinal leaves. Determining disease of plants in crop is the important factor to avoid agriculture yield losses in terms of quality as well as quantity. To decide the plant disease involves to visually observe patterns of irregularities on the plant. For sustainable growth of plants and health monitoring, disease detection plays a crucial role. Manual methods of disease detection are a problem faces these days, as it requires huge human activity and technical expertise in diseases prediction. Crop yield prediction is the useful parameter in agricultural sector. For this data mining techniques are used. This research proposes includes implementing a system that can predict yield of crop from previous data. This is achieved by applying association rule mining on agriculture data. This research focuses on developing a prediction model that is used for future prediction of crop yield. This dissertation report presents a brief analysis of disease detection as well as crop yield prediction using data mining technique. The experimental results show that the proposed work efficiently predict detect disease and effectively predict crop yield.

## Stock Market Analysis using Machine learning

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**Abstract** — In this vast finance driven world stock trading is one of the most important and profitable activity. Stock forecast is the strategy for attempting to foresee the future estimation of an organisation stock or other money related resource of an organisation on a trade showcase . People invest in Stock markets based on suggestions which indirectly are based on predictions. Many methods like time-series analysis, statistical analysis and fundamental analysis are used in an attempt to predict but none of them are favourable for perfect prediction due to the volatile nature of the stock market. The programming language used in this context for analysis and prediction is Python and the prediction algorithm used in this context is Linear Regression to predict stock prices for various companies. This paper explains the prediction of stock using Machine Learning.

## Multivariate Data Classification Using Machine Learning

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**Abstract** — Nowadays, data analytics has become one of the major business tools to gain insights into the data and make many important business decisions. The applications of data analytics are innumerable spawning major applications in various domains including healthcare. Machine Learning (ML) is one of the major tools that drive any data analytics application. Therefore, in this paper, an effort is made to classify the Liver Disease (LD) data set having multiple dimensions of attributes. The data set comprises the 583 observations taken from the liver disease patients and employed Minmax feature scaling to normalize the data. The data set was split into training and testing set in the ratio of 80% and 20% respectively. The training set was trained on Support Vector Machine (SVM), Decision Tree (DT), Logistic Regression (LR), k-Nearest Neighbor (k-NN) classifiers to investigate the best classification model giving maximum accuracy. Amid all the ML classifiers involved, k-NN provides 80% of maximum classification accuracy.

## Forest Fire Detection Using Convolutional Neural Networks

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**Abstract** — In this paper, we have used a Deep Learning approach called Convolutional Neural Networks to train our model. ResNet-34 is the architecture used to train the model to detect forest fires by taking satellite images as input. The dataset has been obtained online and has been subjected to Batch Normalization and Data Augmentation to achieve better results. The model has been trained using satellite images of forests with and without the occurrence of fires because satellites ensure a continuous supply of images for the model to keep testing. The result obtained has a high accuracy and is therefore able to detect forest fires easily with minimal errors.

## Stock Price Prediction Using LSTM

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**Abstract:** The prediction of stock value is a complex task which needs a robust algorithm background in order to compute the longer term share prices. Stock prices are correlated within the nature of market; hence it will be difficult to predict the costs. The proposed algorithm using the market data to predict the share price using machine learning techniques like recurrent neural network

named as Long Short Term Memory, in that process weights are corrected for each data points using stochastic gradient descent. This system will provide accurate outcomes in comparison to currently available stock price predictor algorithms. The network is trained and evaluated with various sizes of input data to urge the graphical outcomes.

## **Driver Safety System Using Machine Learning**

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**Abstract** — The main idea behind the implementation of this project is to prevent vehicle accidents which is common occurrence in today's world. The goal of this paper is to design a non intrusive system which detects lethargy (drowsiness) in the driver using the latest technology and to overcome the electrode system which was attached to the drivers in earlier days to detect drowsiness state in driver's eyes. The earlier technology would irritate, annoy and would disturb drivers while driving. So as to eliminate this method, a new friendly method is being implemented. This vision based non intrusive system is developed for detecting whether the driver's eyes are open or closed in real time. If the driver's eyes stay closed for a threshold time, then the sound module alerts driver's as well as any possible passengers to prevent possible accidents. The project is developed using OpenCV, Dlib ML algorithm, and python programming language.

## **Security Surveillance Video using CNN With SMS Alert**

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**Abstract** — In recent times cameras have been mounted in many different locations for security and surveillance purposes. The inspection of the data that is captured using the surveillance system can play an vital role in predicting an incident in particular situations, to monitor online for security reasons and also for an objective driven evaluation of applications such as anomaly and intrusion detection. Presently many AI (Artificial Intelligence) based techniques are been used to detect anomalous activities among which Convolutional Neural Networks (CNN or ConvNets) using deep learning techniques has improved the precision significantly. The main aim of this project is to recommend a new model based on CNN a class of deep neural networks to detect anomaly in the video captured by surveillance cameras. This method has been trained and evaluated using the UCSD dataset and has showed an increase in the accuracy of the anomaly detection model.

## **Prediction of Phished Website at Scale Using Machine Learning**

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**Abstract** — Phishing is one of the baiting systems utilized by phishing craftsman in the goal of misusing the individual subtleties of unsuspected clients. Identification of phishing sites is an extremely significant security measure for the vast majority of the online stages. Phishing site is a false site that seems to be comparable in appearance however changed in goal. The unsuspected clients post their information feeling that these sites originate from confided in monetary foundations. A few enemy of phishing methods rise constantly yet phishers accompany new procedure by breaking all the counter phishing components. Thus there is a requirement for effective instrument for the forecast of phishing site.Detection is done using many attributes out of this we need to identify the best set of attributes. The data set is divided into testing and training set. Further, five machine learning algorithms such as Logistic Regression, SVM(Support Vector Machine), Random Forest , Decision Tree, Neural Network have been utilized to arrange the web phishing informational index, break down the outcomes and distinguish the productive strategy to group the website page phishing informational index.

## A Survey On Value Forecast Of Tomatoes

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**Abstract**— Increased awareness about nourishing and healthy lifestyles to propel the consumption of vegetables in order to meet diverse dietary and nutritional needs. The global tomato market was valued to register a Compound Annual Growth Rate of more than 6.5% over the forecast period of 2020-2025. Accurate prediction of agriculture prices along with increasing awareness among individuals about the benefits, especially in emerging economies such as India and South America is impelling the market revenue of tomato to the minimum extent. Changes in weather patterns due to upsurge in global warming across the globe have increased the adoption of advanced farming devices such as sensors, monitors, display devices and farm management software. Agriculture is one of the prominent sectors which plays a major role in food security, economic growth and poverty alleviation. Government and alternative accountable bodies ought to formulate and implement applicable market and evaluation policy, bare market data in correct media, and improve road networks to boost the effectiveness of vegetable selling.

## User Job Profile Matching Using Multiple Measures

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**Abstract**— Social media has been increasingly used in various aspects of job matching with respect to user job profile, but all of it has been done manually by the Human Resource personnel. Multiple studies have already shown the effectiveness of social media analysis in job matching. Our goal here is to implement it in an effective and convenient system and thereby save time and resources wherever possible.

## Detection Of Employee Stress Using Machine Learning

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**Abstract**— Disorders of stress are very casual thing among the employees who are working in corporate sectors. As with changing work of people and their living lifestyle, we can see the increment of stress in the working employees. Even many corporate sectors are providing variety of schemes related to mental health and trying to reduce the disorders of stress in the working environment, the disorder is very far from stopping. In our paper, we are going to make use of two techniques of machines to determine the amount of stress the employee is having who is working in corporate sectors and try to narrow down the issues that identify the stress levels. We are going to apply two techniques of machine learning (i.e. SVM and Random Forest) when the data preprocessing and the cleaning of data is once finished. The correctness of our trained model was clearly read and analyzed. By using these two techniques of machine learning, the main features that result in disorders of stress are found to be as sex, background of family and ease of benefits of health in the working place of employee. With these results, corporate industries can now narrow down the stress and can establish a very friendly working place for the corporate sectors employees.

## Intelligent Accident Management System

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**Abstract**— India is a densely populated country where traffic is a major issue in our country. We can see traffic accidents are increased day by day and becoming more pathetic nowadays. Even though the government are running so many campaigns to raise awareness in public but still we can't able to reduce the death rate due to road accident are not decreased at all. Main cause of the accident is a high speed, rash driving and mental pressure. Some of the papers deals with how to track accidents before it could happen and alert the driver to maintain some speeds limit so that person can avoid an accident by taking early precaution to avoid the accident but this paper focuses on how to rescue person life by immediately admitted to a nearby hospital after meeting with an accident. the paper deals with analysing an image uploaded by the end-users once the image is uploaded into the module. once it is uploaded it should satisfy many criteria if these criteria are satisfied only then it continues the process otherwise it terminates the process .criteria to be satisfied to continue the execution one it is a recently uploaded image or it should not be downloaded image, second it is real or fake, third it should be major injury if it is a minor injury then it will terminate the process .these all things happen in the second module i.e. image processing. once the image processing is done it will track the exact location where the accident has met through GPSs send the exact address and ping to the ambulance to arrive at that exact location.

## Method to Filter the Unwanted messages for OSN

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**Abstract**— One key issues in the present (OSN) is to give clients a full capacity to control all the messages posted on their own space to keep up a key decent ways from that unwanted things are showed. Up to now, OSNs offer a little help to the basic. To fill the gap thing, as of now, it has proposed a structure permitting clients to having a brief control over the messages that are posted on their space. This paper comprise of a writing study paper of the current frameworks with proposed framework as a procedure to channel comparative importance words utilizing Ontology alongside the fundamental usefulness to channel the OSN divider for undesirable message. There are different sorts of data sifting techniques specifically Content based separating strategy, Policy based sifting technique and Collaboration sifting strategy.

## Using Recommendation System to help Students choose a career field based on their Interests

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**Abstract**— We have witnessed many domain to study the recommendation system and use it in different profiles like in huge number when it comes to e commerce. Many experts has already established this technique in different other sectors as well. But we cannot ignore the fact that there is very less information in recommendation system when it comes to student's career and our approach is to achieve that goal. In our Experiment, we are trying to develop a questionnaire to test and know what career field the user (the person who is solving the questionnaire) is interested in. The result is dependent on variety of different factors which range from what level of study are they currently doing (PU, UG, PG, etc.) to what kind of skills they possess. All these factors are then taken in consideration and then the inputs are compiled to provide a result. We are using Flask (a python microkernel as the backend of our questionnaire to handle all the inputs we are receiving and then Using HTML, CSS and JavaScript to display the UI/UX of the questionnaire. This will be explained in detail in later sections.

## Human Behavior Recognition based on Convolutional Neural Network (CNN)

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**Abstract**— Individually working up on collection of human behaviour identification structure supported the Convolution Neural Network created for the precise behaviour of human in publicly places. Essentially, a video with some behaviors of human information sets are divided into pictures. Subsequently, we have a tendency to method all the pictures by using a vigorous mechanism called background subtraction which detects the changes in order of images that helps in finding many applications. For instance the coaching information set area unit are up skilled with an outline of CNN model, and the deep learning networks are made of random Gradient descent used for updating the framework of our model. Ultimately, assorted behaviors with samples area unit are systematized and known with the acquired system replica. Therefore, area unit will equate the present thought ways. Upshot displays that Convolutional Neural Network will analyse the human behaviour model mechanically and determine the behaviour of human without any metadata.

## Machine Learning Techniques to Detect Breast Cancer

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**Abstract**— Breast Cancer is one of the regular diseases in ladies as well as in scarcely any men. As indicated by explore, the death pace of females has expanded chiefly on account of Breast Cancer tumor. One out of each eight ladies and one out of each thousand men are determined to have breast malignancy. Breast cancer tumors are for the most part grouped into two kinds: Benign tumor which is a non-dangerous tumor and other one is harmful tumor which is a malignant tumor. So as to realize which kind of tumor a patient has; the exact and early conclusion is an extremely significant advance. ML calculations have been utilized to create and prepare the model for arrangement of the sort of tumor. For exact and better grouping a few characterization calculations in ML have been prepared and tried on the dataset that was gathered. As of now calculations like Naïve Bayes, Random Forest, K-Nearest Neighbor and SVM demonstrated better precision for order of tumor. At the point when we executed Multilayer Perceptron (MLP) calculation it gave us the best precision levels among all both during training and testing. Mlp algorithm gave an accuracy of 97%. Along these lines, the specific arrangement utilizing this model will assist the specialists with diagnosing the sort of tumor in patients rapidly and precisely.

## Self Driving Cars The El-Dorado Of Future Technologies

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**Abstract**— Visualize yourself being able to sleep and drive. It might appear like a funny concept, it is going to be true eventually. Furthermore, many MNC's has taken into consideration this prototypes for self-driving cars and are functioning accordingly, and this visualization might come into existence ultimately. The self-driving does not require accelerator or steering handle, because self-driving cars are free from human intervention, self-driving cars uses laser beam sensors and high resolution cameras for assistance. This might appear unconventional, but there is a supporting evidence that makes us believe that self-driving cars are more safe and secure than the automobiles we have nowadays. Further, self- driving cars improves personnel safety and minimize the traffic related congestion problems.

## Vegyzone

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**Abstract**— India is one among the countries that are cautious about the safety of the food thus leading the country to mainly focus on the agricultural development programs in the current scenario. This paper is mainly based on exchanging goods and services in the field of vegetable marketing with healthy and freshly cultivated vegetables. The idea is completely implemented on online platform. Profit is gained by avoiding the intermediate agents and providing fresh vegetables at a reasonable price. Mainly to afford quality vegetables and management of vegetable transportation from farmer to warehouse and to the customer. It also improvises the pattern of vegetable sales that enhances the modern lifestyle of the citizen.

## Opinion Mining of Twitter Data Using Machine Learning

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**Abstract**—People express their opinions through social media sites like Twitter, Instagram, and Facebook. Tweets can be used to analyze opinions expressed towards various keywords, which can be anything from the names of products, companies or famous people. Consumers can utilize the insights of analyzed opinions and companies that want to monitor the public sentiment of their brands or any other situation where data on public opinions can be useful. Training data is abundantly available and can be obtained through automated means, we've obtained our data from twitter. The goal of our project is to implement the most effective algorithms and compare their accuracy. We use machine learning techniques like Max entropy, Naive Bayes, SVM and DCNN (Deep Convolution Neural Network). The data is analyzed for the presence of emoticons and keywords that either signify positive or negative expression towards the query term by Max, NB, and SVM methods. In DCNN, latent contextual semantics relationships and co-occurrence of statistical characteristics are used to obtain word embeddings between the words. Finally, word embedding is combined with n-grams and a polarity score is issued for the tweets. Our research focuses on comparing the accuracy of these algorithms to determine which are the most effective and accurate.

## Movie Recommendation System

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**Abstract**— In this digital era that we live in, Recommendation systems have become a part and parcel of our everyday lives. There are tons of options out there for everything that we do and people might find themselves in a difficult place while making a choice, ‘a perfect one!’ This is where the Recommendation Systems step in. Internet Giants such as Amazon, Netflix, YouTube, Spotify, Facebook etc can be seen using these technologies to keep their audience interested. So, through this work, we attempt to build a simple movie recommendation system employing the famous technique ‘User-User Collaborative Filtering’ and design a GUI for the same.

## Stars – DL

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**Abstract** — The purpose of this project is to detect, track and notify the intruding objects. The system will have a clear view of the surveillance area with a high pixel camera or a surveillance drone. The camera will be fixed in a position that the surveillance area is covered. It will identify interruption and perceive the object by contrasting its features with the features of the objects that are stored in the database. If a feature matches the intruding object, then it will get tracked and will notify the authorities. Thus, the image will be captured, proceed and the authorities can take actions necessary. The above system will work as a detection, recognition and alert the intrusion which will be of great use for Military applications. Our system ensures low execution time.

## Early Detection of Leaf Disease Using Deep Learning

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**Abstract** — In India most of the rural population depends on agriculture. One of the problem in agriculture is leaf diseases. Due to leaf disease the yield of a crop is decreased and also affects the quality of fruits and vegetables. Identification of leaf disease plays an important role. By early detection of disease and providing right pesticides at proper time disease can be controlled easily. Nowadays in deep learning approach CNN is widely used for various computer vision tasks. In this paper we proposed system for detection of leaf disease and recommendation of the pesticides using CNN-AlexNet Model

## Multi-layer artificial Neural Network for Estimating Real-Estate Prices

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**Abstract** — The estimation of land costs, are a helpful and sensible methodology for purchasers and for neighbourhood and monetary specialists. It is of most extreme significance to assess the present status of the market and anticipate its presentation over the present moment so as to settle on suitable money related choices. We will utilize two propelled displaying approaches Multi-Level Models and Artificial Neural Networks to demonstrate house costs. This methodology is contrasted and the standard Hedonic Price Model as far as exactness in expectation, gathering the area data and their logical (understanding) power. This undertaking presents the advancement of a multi-layer fake neural system based models to help land financial specialists and x Home designers in this basic assignment.

## Machine Learning-Based Weather Forecasting on Freely Available Weather Data

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**Abstract** — Weather forecasting is mostly a numerical measure rather than a binary conclusion. Precise weather forecasting is one of today's highly interesting tasks which deals with an enormous amount of observations and features. We aim to develop an intellectual weather forecasting module. A smart forecast based on the freely available data is achieved with machine learning techniques. This module reflects traits such as maximum temperature, minimum temperature, and rainfall for an experimented period of years, and they are evaluated. The dataset is repossessed from a website named DarkSky. To abridge the recovery of data, a Python API is used to study meteorological data has been established. The study is grounded on Linear Regression and an Artificial

Neural Network model that forecast next day weather with good precision. An accurateness of more than 94% is gained based on the dataset. New explorations have shown that ML methods accomplished better presentation than old-style statistical approaches. Machine learning, a subdivision of artificial intelligence has established to be a robust method of foreseeing and examining a given data set. This unit plays a significant part in the field of agriculture where weather forecasting is a vital aspect.

## Stock Predictor Analysis Using MI And Data Science

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**Abstract**— Stock Market is a dynamic market where the prices vary and it becomes difficult for an investor for predicting the prices considering external factors like factors like political situations, public image on the company according to efficient market hypothesis. Stock market is extremely volatile and ever evolving with constant developments and research in machine learning and deep learning. This paper deals with a comparative analysis between the most commonly used prediction methods such as Linear Regression, LSTM, CNN, both statistical and recursive learning models using tensor flow and machine learning to find the best fit for individual companies based on historical data.

## Identification Of Differentially Expressed Genes Using Bi-Clustering

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**Abstract**— In order to identify the biologically relevant gene module and also which are the genes responsible for causing a disease, we use Bi-clustering technique which is also a useful co-clustering technique .In this paper, we present an exceptional method to state specific gene modules and also functionally related gene modules which are the reason for disease causing ,by applying a genetic algorithm to genetic data which is in the form of microarray data. To detect these differentially expressed gene modules, the anticipated method finds biclusters in which genes are overexpressed or under expressed, and also which are differentially-expressed in the samples of genetic data. Inorder to get the differentially expressed we perform three steps in which we use K means alogorithm for clustering and Cheng and Chruch algorithm for biclustering. As to overcome the drawbacks in clustering we use Bioclustering technique which reduce redundancy in the data. The ensuing gene modules uncover preferable exhibitions over near techniques in the GO (Gene Ontology) term enhancement test and an analyzed association between gene modules and infection

# DIGITAL IMAGE PROCESSING

## Sentimental Analysis on News Topic Using Live Twitter Feed

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**Abstract**— Estimation assessment oversees perceiving and requesting sentiments or thoughts conveyed in source content. Electronic life is making a colossal proportion of presumption rich data as tweets, declarations, blog sections, etc. Feeling assessment of this customer created data is entirely important in knowing the appraisal of the gathering. Twitter end assessment is inconvenient stood out from general supposition examination as a result of the closeness of slang words and mistaken spellings. The most outrageous cutoff of characters that are allowed in Twitter is 140. Data base procedure and Machine learning approach are the two systems used for exploring estimations from the substance. Right now, endeavor to explore the twitter posts about electronic things like mobiles, workstations, etc using AI approach. By doing decision assessment in a specific zone, it is possible to recognize the effect of room information in suspicion portrayal. We present another segment vector for gathering the tweets as productive, opposite and concentrate social orders' decision about things.

## Fake Indian Currency Detection using Image Processing

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**Abstract** — This paper aims to detect counterfeit currency and output the result. The model accepts the image using a mobile camera. The features from the scanned image are extracted and are matched to a set of templates. When a match is found, the result is outputted if it was genuine or not. This paper uses four algorithms: image resizing, image filtering, sobel edge detection and template matching. Even though printing of fake currencies is illegal, counterfeit currencies are still being circulated in places with no means to verify the authenticity of currency. This project is based on the idea to prevent further circulation of illegal notes. The goal of this project is to detect fake, counterfeit notes. It also detects the denomination. It is done by following a set of steps in the same order. Firstly, the image of the currency note is acquired from mobile phone (camera). Secondly, the acquired image is resized to or scaled down to the dimensions 500 x 300. This is followed by applying bilateral filter to remove noises in image. Then the features which define the authenticity of a currency note are detected by applying sobel operator. The features are matched with those of an authentic note, by applying correlation regression. Lastly, the features are identified and displayed if the note is authentic.

## Sentiment Analysis on Movie Reviews

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**Abstract** - Sentimental analysis of movie reviews is basically excavating the judgements based on the existing movie analysis on the internet. This approach identifies and categorizes the subjective opinions to decide the attitude of the subject towards a particular text. These subjective opinions determine the satisfaction level of the subject and also determine the success or the failure rate of the text. The polarity or the differences between these opinions are found using various pre-processing techniques i.e. filtering of data by converting the text into words, removing the stop words and negating the neutral opinions. For the faster processing, feature extraction and feature selection techniques are used as it reduces the word count by eliminating redundant contents. The accuracy of these subjective opinions is governed by using certain classifiers such as Naive Bayes, Logistic Regression, Decision Tree, and Random Forests. Each classifier has a different accuracy rate processes based on the given code values. This paper focuses to find out which classifier gives the most accurate result.

## Gradient Descent based Support Vector Machine Approach for Sentiment Classification

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**Abstract** — Sentiment classification is one of the important tasks in the effective classification of the review text into the different sentiment categories, like positive, negative or neutral. In this paper, a sentimental classification method, known as Support Vector Machine, was developed. Initially, movie review database is subjected to pre-processing in order to remove redundant and unnecessary words from the data. Then, the feature extraction is carried out by extracting features, like All-caps, Emoticon, Hashtag, Elongated units and sentiment lexicon from the reviews. Based on the features extracted, the classification is performed enhanced SVM. The performance analysis of the proposed method is evaluated based on the metrics, like accuracy, sensitivity and specificity. For training rate  $r=0.3$ , the proposed method provided a maximum accuracy of 0.7879, sensitivity of 0.8261 and specificity of 0.7520 when compared to the existing method.

## A Study on Data Protection and Privacy in Medical HealthCare

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**Abstract**—The growths of things in internet which are associated together to communicate with each other in the healthcare field are changing their delivery scheme. Rather than visiting the emergency clinic for help, patients' wellbeing related parameters can be observed remotely, constantly, and continuously, at that point handled, and moved to restorative server farm, for example, distributed storage, which extraordinarily expands the quality, security, effectiveness, comfort, and cost execution of social insurance. But this integration comes with security risks as the devices are connected to the internet, the valuable data can be altered or pirated by the third party. Hence security and privacy has become the major challenge in today's world especially in IOT. This paper proposes few Cryptographic techniques to avoid security and privacy issues by providing.

## A Survey on Early Diagnosis of Alzheimer's Disease using fMRI Data and Neural Networks

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**Abstract**— Diagnosis of Alzheimer's disease at an early stage has undergone rapid improvement in the modernized medicinal services field. Determination of Alzheimer's Disease (AD) is frequently troublesome, particularly at the beginning times which is the Mild Cognitive Impairment (MCI) . Despite the fact that, at this stage treatment is destined to be viable, henceforth demonstrating to be progressively beneficial in improving the conclusion procedure. Some ongoing investigations have demonstrated promising outcomes in the determination of AD and MCI utilizing utilitarian Magnetic Resonance Imaging (fMRI). The principle of this paper is to recognize among techniques to locate the most proficient approach to separate an Alzheimer's cerebrum from a

normal cerebrum. The different strategies utilize Neural Networks to become familiar with the deep hidden features.

## **Classification And Extraction Of Brain Tumor Using Hybrid Algorithm**

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**Abstract**— Rapid growth of unwanted cells or abnormal accumulation of tissues that leads in the formation of tumor in brain is called Brain tumor. Tumor is always considered to be a dreadful disease, if not detected at the initial stage. As this has been a rapid growing threat among human race. Detection and extraction of such vulnerable dangerous diseases has become the most demanding one. In spite of existing techniques of detection, the accuracy has always been a challenging task. Misinterpretation is occurred during the evaluation of data sets of images, in detection of tumor which leads to a contradictory validation. Extraction of the tumor region from large data sets is has always been a grim. The extant innovations are Non-negative factorization (NMF) Principle Component Analysis (PCA), Convolutional Neural Network (CNN), K-means clustering algorithm, one-way analysis and variance (ANOVA) etc. In this research paper a proposed solution for the classification and extraction has been resolved by using hybrid algorithm. The hybrid consists of two algorithms further classified into two modules which consist of Convolutional Neural Network (CNN) and Deep Neural Network (DNN) respectively.

## **Drowsiness Detection System Using Haar Classifiers**

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**Abstract**— The image processing algorithm is used to create a non-intrusive device that can detect any human being's exhaustion and that can provide a timely alert. Studies by the expert show that about one-fifth of all serious motorway incidents are due to tired drivers in need of rest, which suggests that drowsiness causes more road accidents than drunk driving. Using a camera, this device can track driver eyes and, by creating an algorithm, we can predict driver's fatigue symptoms early enough to prevent the person from sleeping. Right now, consider certain parameters like the discovery of the face, the position of the head and the flickering of the eye. Picture Processing Algorithms are utilized to guarantee legitimate identification of tiredness to keep away from mishaps. So, this project will help detect driver fatigue in advance and will offer alarm and pop-up warming performance.

## **Real-time Face Recognition System using LBPH**

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**Abstract** — Face recognition is a biometric software application which recognizes a person by comparing and analyzing the geometric features of the face. We have developed a system for face recognition in real-time environment. Initially multiple inputs are taken from the web cam then the face is detected, extracted and then stored in a dataset. When a new face is input from the web-cam, the input face is extracted and compared with the images in the previously created dataset. We have used HAAR face classifier for face detection and LBPH for face recognition, Coding was done in python. Experimental results show that the proposed real-time face recognition method detects and recognizes faces accurately. In the world today with increasing number of security concerns, a real-time face recognition system will be helpful in building security systems such as criminal identification system, attendance system etc.

## Road Accident Detection System

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**Abstract** — This paper aims to help the unfortunate victims of a road accident by alerting the nearest medical authorities as soon as possible. Through this paper, we have trained a model to detect vehicles and people through the real time C.C.T.V footage of a road and more importantly an accident which has occurred using a convoluted neural network known as YOLO v3 which is based on Darknet.

## Automated Event Monitoring System using Facial Recognition

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**Abstract** — In the current day and age, while organizing any event, one of the biggest concerns is that of security. Being able to monitor a large event requires a huge amount of security personnel and resources and due to human involvement, there will be cases of ignorance in security. In any event, there will be many security personnel whose only job is to keep looking at the live security feed to avoid the entry of unauthorized individual. Our model demonstrates a way to minimize human involvement. By equipping all the cameras with facial recognition algorithm, we can solve this problem easily. As soon as system finds an unauthorized person inside the premise, it will inform the administrator who then will be able to take necessary actions in premise. This way, we can minimize the security mishappens due to human negligence and since a computer doesn't require to take break, this entire process can keep running without interruption for as long as administrator wants.

## Locating Theft mobile Using efficient Face recognition

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**Abstract** — A thief after stealing the mobile, will automatically switches off and removes the SIM card to deactivate the mobile. When the user inserts a new SIM card into the stolen mobile, our application which is running in background will track the SIM card details and cross check with the cloud server for that particular IMEI number that is the actual SIM number via GPRS (Global Packet Radio). If not the actual user of the mobile he/she will get the alert in the shape of SMS (Short Messaging Service) or through Email along with the current GPS (Global Positioning System) location of the stolen mobile and the photo of the thief. Find out the stolen mobile with the help of GPS and GPRS. The thief face will be forwarded via Email, and will also contain necessary information like SIM card number, IMEI number, current location of the mobile, etc. We had proposed a different approach to find out the thief and the stolen mobile in a more accurate manner.

## Speech guidance using Real-time object detection

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**Abstract** — There are 40 million visually impaired people in India, they find it very difficult to perform basic day to day commuting, as they are unable to read traffic signs and detect nearby objects, also they can't find the exact position of the vehicles and they often rely on other pedestrians to guide them to their destination. This project aims to provide a method to solve this issue through an application that contains an image recognition system that detects nearby boards and signs in surroundings. The camera is used to capture the image and the captured image is analyzed (object detection) and converted into text and then text to speech model converts text into audio format. This enables them to know their position and helps them to decide where to go without asking anyone else. It not only makes their travel easier but also saves a lot of time and enhances their safety on roads. It makes them independent.

## Public Safety Implementation of Facial Recognition

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**Abstract** — The objective of this project is to make it easy for users who have lost their people and trying to find , as the process of finding missing ones gets easier by using the web application as the user just has to upload the picture of the person who is lost and if the details given by the user matches with our database then the details will be shared such as the whereabouts. The main idea is to help people make finding their lost ones easier. It is really necessary because there are so many missing cases across the world which are increasing drastically and the chances of finding the missing person is nearly impossible. As our Web Application make use of Facial Recognition to help find the missing ones as our web application makes it easier and it's easily accessible. All the web application needs is the picture of the lost person to be uploaded and any user can upload a real time picture of the person to be found which is to be compared to the existing pictures in the database. And if a match is found, then the user who uploaded the picture will get the given details of the missing person. Making this process easier and faster makes whole dynamics of finding a missing person way more accessible and easier compared to the pre-existing methods.

## 3D Brain Tumor Detection using MRI images

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**Abstract** — Brain tumor is an extraordinary infection, and the scope of individuals that are death toll because of the brain Tumor which is developing. To investigation the tumor physically from the magnetic resonance images (MRIs) is a period taking procedure to detect, localizing and classifying the tumor type. Precise the segmentation of the MRI image it is indispensable for the examination of the brain Tumor by methods of any is computer aided clinical tool. After the appropriate division of brain MRI images, the brain tumor is classified to malignant tumor and benign tumor which is a tough endeavor because of intricacy and form of the Tumor tissue qualities like its structure, size, stage(grade) forces and area. The proposed system for brain tumor detection framework comprises following steps: pre-processing, feature extraction, segmentation. After pre-processing morphological operations, brain tumors will appear as pure white color on the pure black backgrounds. We have utilized Brats 2019 preparing datasets of neuroimages where HGG is 120 MRI brain images and LGG is 50 MRI brain images to advance our framework and 76 Brats 2019 approval datasets of neuroimages to test the framework of our proposed system. The proposed system of tumor detection framework is seen as ready to precisely detect

the brain tumor in magnetic resonance imaging. The preliminary results demonstrate how a simple deep learning segmentation with set of simple pixel-based features can result in high classification accuracy. The preliminary results also demonstrate the accuracy and F1 score in our brain tumor detection approach and inspire us to extend this framework to localize and classify a variety of the other types of tumors in other types of the medical imagery.

## **Sentimental Analysis for Movie Reviews**

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**Abstract—** Sentimental analysis is defined as the use of computational linguistics, natural language, text analysis and biometrics to recognise, extract, test and study useful attributes and their information. We considered two different datasets both pre-dominantly pertaining to IMDB as source. One of the considered datasets composed only textual content which was processed by removing unnecessary contents and distributed into two categories namely positive and negative. We further divided the data into training dataset and testing dataset. Using more relevant training algorithms such as logistic regression and decision tree algorithm, we had more relevant attribute which helped us in training our model to predict if a review is positive or negative. When this analysis is linked with other attributes of any product of interest, we can accurately pin point or predict a product's rating even before it sees broad day light.

## **15 Level Single Phase Multilevel Inverter Topology with Equal Area Criteria PWM Technique**

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**Abstract—** 90 percent of the motors used in industries are induction motors due its simple design and high robustness. Total Harmonic Distortion of output voltage waveform keeps decreasing as the number of voltage levels increases. The main consideration while selecting a multilevel inverter is its quality of the output voltage waveform which is assessed in terms of the amount of harmonics content present in it. So, Total Harmonic Distortion (THD) value in the output voltage waveform is one of the important criteria in the multilevel inverter (MLI). The 15 level hybrid multilevel inverter circuit was simulated in Matlab/Simulink environment and the results were experimentally analysed for a resistive load. C code was developed to generate PWM pulses. Arduino microcontroller is used to feed the PWM pulses to the switches in the inverter circuit. From the overall analysis, it is proved that Equal Area Criteria (EAC) method is superior to the other PWM methods.

## **Facial Recognition System using Image Processing**

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**Abstract—** Authentication is a major challenge in computer-based communication system operation. Human face recognition is an important branch of biometric verification and has been commonly used in many applications, including video monitoring system, human-computer interaction, door control system, and network protection. A computational neural network can be implemented as a framework in the face classification process. In order to recognize dimensions within the intend-able limits, the test system offers acceptable performance. The

device also allows multiple faces to be identified and recognized in live pictures. Using OpenCV and programming with Python, we design a real-time face recognition system.

## **Traffic Stop line Crossing Detection System Using Image Processing**

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**Abstract** — Using technology to detect traffic violators in many developing countries is challenging. And people in these countries really don't care about rules or doesn't know that rules exist. This gives inspiration for developing automated stop-line crossing detection system. This paper presents about cost effective system that uses Arduino-UNO and simple camera to detect people standing on zebra crossing when signal turns red. It also prevents the human intervention and detects stop-line violators swiftly. The system is autonomous and can detect more than one vehicle at a time and immediately send notification to violator. The system presents Automatic number plate recognition techniques and some other image manipulation techniques for number plate detection and character detection.

## **Extracting text from the picture by using OCR technology**

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**Abstract** — Like it, all known, almost all the cell phones now existing in the world almost have all have at least good quality of back camera except to some phone and also, a few years before, technology enhances and technical industry people launched new application by using this camera on which very big documents is achieved by completely traversing this camera on it. Now, it's a strong effort to make out to upgrade this application. Now, this application can extract the text from the picture. It is a tricky assignment due to creative actions of mobile camera beside by way of hand on shaking, transform in enlightenment suitable to hand overshade, etc. the matter has extra complied through the detail that transcript alphabets which not hold diverse quality which is mainly an input necessity for panoramic icon invention. An outline is intended for some time to filter the configuration of icons depends upon the supermodel designing. This saves memory by extracting text from images by using OCR technology.

## **Text Recognition from Images using Image Processing Technique**

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**Abstract**— Image Processing is a next level character and object recognizer. At present image processing is a major technology that evolved in order to identify things as same as human eyes. It is developed by using a trained model in order to capture objects optically, it has greater error rate in order to capture the character and objects. Nowadays it is popularly used everywhere in various businesses and software tools. A paper document is best source of raw data but filtering required information from it is difficult. In order to gather in such a way, we need information into textual document which easily underpass into filters and produces required output from it. Image processing algorithms are not accurate enough to give efficient output of the text document. It can be improved by using trained model which frequently updates the algorithm efficiency and in order to decrease the word error rate. In this way text can be recognized efficiently from the image. The major distractors in this are image quality, image contrast, pixel level impurities and image backgrounds acts a lot in text recognition. Various improvements are brought in order to get the best out of the image content.

## **Virtual Telepresence Robot Controlled With Hand Gestures (Vitel)**

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**Abstract**— ViTel is a robot which is developed in order to achieve virtual telepresence which makes the user feel as if being present in the desired location without physically being there. This robot is a wheeled device which is controlled with hand gestures for the movements, the robot enables the user to control it from a distance and succeed in achieving the view of the objects the robot aims at. ViTel consists of a smartphone in dual screen to experience virtual reality placed inside a VR headset and a two wheeled robotic vehicle. This is an immense aid to view remote locations and to view the places where mankind cannot sustain. By the impact of this, the pollution due to travel and the loss of life can be reduced. It can be used as an application in military and high security bases as well.

## **Assistive Communication For Blind**

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**Abstract**— One of the foremost precious gifts to somebody's being is a capability to determine, listen, speak and respond in line with the situations. But there are some unfortunate ones who are bereft of this. Making one compact device for people with Visual, Hearing and Vocal impairment could be a tough job. Communication between deaf-dumb and normal person are always a challenging task. This paper proposes an innovative communication system framework for deaf, dumb and blind people in an exceedingly single compact device. we offer a method for a visually handicapped person to read a text and it will be achieved by capturing a picture through a camera and which will be converted that text to speech (TTS). The blind people will be ready to read the words using by Tesseract OCR (Online Character Recognition), the dumb people can communicate their message through text which is able to be read out by espeak, the deaf people will be ready to hear others speech from text.

## Software Tool With Animation Support To Graphically Display Signals With Colour Effect

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**Abstract**— This Project work aims to build the software system or tool that can display the information on the screen in the form of waveform and can analyze properties such as amplitude, frequency, rise time, distortion, time interval and etc based on what type of signal is used same as that of or similar to hardware CRO. The CRO is an electronic hardware test instrument, it is used to get waveforms results when the all verity and different type of input signals are given to it. many years back, it is called as Oscillograph. The oscilloscope which always observes the changes and differences in the electrical signals or any other type of signals over time. It is continuously graphed on screen beside a scale and dimension of the signals. By seeing the waveform, we can analyze changes in signal and some properties like frequency, amplitude, rise in time, distortion, time interval or difference in time and etc based on what and which type of signal is used.

## Censorship tool to detect NSFW content in a video file

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**Abstract**— Internet has vast content which is spread like wildfire across different devices, countries, cultures and ages. When so much content is available it is often prone to abuse. The abuse is mainly from NSFW (Not Safe For Work) which reaches inappropriate audiences. Our project focuses on detecting the NSFW content and letting user know if the content that they are viewing has NSFW before viewing the content. Our idea is to work with video files as they possess NSFW frames which popup without user's control over it. We use a pre-trained classifier (nudenet) to classify if a frame has NSFW content or not.

# **MOBILE COMPUTING AND CLOUD COMPUTING**

## **Voice Activated Pet Feeder Using Cloud**

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**Abstract**— in modern society, people own pets such as dogs, cats, birds and many more. However, many pet owners are not able to cater time from their busy schedule to feed their pets which is the primary responsibility of a care-taker for maintaining the health of the pet. Business pet feeders came up when majority of the pet owners found it hard to attend to the nourishment needs of their pets. Pet feeders are programmed feeders that are intended to apportion specified segments of food at certain times, so they guarantee that your furry companion will be very much benefitted from time. A nutritious, balanced diet is essential to keeping the pet healthy. In this digital age, speech recognition system is commonly used to operate devices and perform commands. Google Assistant is probably the most advanced and dynamic of assistants available. This paper intends to design a pet feeder which will ensure that the pet is fed, even when the owner is far away with the help of their phone using Google Assistant. The command from the owner is received through Google Assistant and it is recognized with the help of IFTTT. The command is then passed to the pet feeder, prompting it to dispense food for the pet.

## **A Certificate Technique and two factor Authentication for Cloud Security Adaptation**

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**Abstract** — The unforeseen nature of Cloud Computing visibility as well as manage among the data owners, applications, along with cloud providers raises tenants vagueness when utilizing cloud based services. Adaptation methods offer a reliable infrastructure based on cloud with assured behavior that preserves the excellence of service for tenants. Existing adaptation methods mainly concentrate on work qualities as well as they use non verifiable proof that is gathered in non-trustworthy manner. In this work, we recommend a technique for security-oriented adaptation for the cloud, dependent on the evidence gathered through trustworthy resources of a certificate procedure along with two factor authentication mechanism. With this approach the cloud will keep stable security attribute over the time, through continuously confirming certificate validity with a digital signature with Google cloud KMS along with two factor authentication of the certificate. To protect users against digital identity theft, 2FA (Two-factor authentication) is a famous technique. Two-factor authentication connections access online information as well as accounts to having 2 or more than two tokens which show permission or ownership. It utilizes the output of verification actions and provides a model, in which corresponding configuration is utilized as the origin for adaptation.

## **Comparison & Adoption of FOSS Serverless Computing for Enterprise Openstack Cloud Platform**

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**Abstract**—Cloud Computing paradigm accelerated the phase of development & deployment of software applications over on-demand ape-enabled programmable infrastructure. However, the decision factor of hosting the applications over On-Premises or Public Cloud generally dependent on the features of Cloud Service offerings

like IaaS, PaaS, CaaS and SaaS from the respective Cloud Platforms. Public Clouds are always on top with their taxonomy of service offering list, this worries enterprise IT departments about future platform dependency and cost aspects, hence phenomenon of Open Source Cloud Computing platforms like Open stack [25] are encouraged by IT Enterprises to offer Cloud Services similar to Public Clouds. Server less Computing is an emerging cloud service construct wherein software applications decompose into multiple independent stateless functions, which are run only when invoked or triggered by events and killed when functions session expired. There are multiple FOSS Server less Computing frameworks available, comparison & adoption of suitable framework for Open stack based On-Premises Cloud platform with appropriate design and implementation procedure is the objective of this paper.

## **Power-aware virtual machine migration for Resource Allocation in Cloud**

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**Abstract**— with the extensive growing demand for cloud computing, virtualization plays an important role to provide services to the end users. Due to the increased use of cloud, managing and running multiple VMs on cloud is becoming a difficult task. Therefore, it is important to solve the problem using efficient technique. The task includes reducing the energy cost which can be achieved by reducing the power consumption. Reducing the power consumption decreases the carbon emission that leads to green cloud computing. Our main objective is to decrease power consumption and reduce SLA violations. This objective is achieved by using CPU stipulation for VM selection, modified local regression for VM migration, adaptive utilization threshold base and non-threshold base algorithm for host selection.

## **An Efficient Encryption and Decryption Method for Image Steganography**

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**Abstract**— in a digital world, data protection has become highly important issues. For secure data transmission, steganography and cryptography are used where steganography is focusing on the existence of a message secret and cryptography is focusing on content message secret combining both technologies will give more protection for data. In this paper, a base64 encoding method is used to encrypt the secret information which will be embedded into the cover image. An android application is built to perform encoding and decoding operations which is user friendly, fast and secure. Image quality is measured using Peak Signal to Noise Ratio (PSNR), Mean Square Error (MSE) and histogram analysis. The experimental result shows that the stego image can store large amount of data while PSNR, MSR, and histogram analysis values proves that stego image quality is almost similar to cover image and distortion less images.

## **Self-billing smart cart**

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**Abstract**—Shopping mall has thousands of customers each day. There is huge loss of time for the customers to first search for the product they need and then to stand in the long queue for billing. This project deals with resolving these issues. Upon entering into the mall, the customers have to login into application hosted by the mall where the customers can easily find the products they require. Later after the shopping is done, they can bill the

products themselves by using the barcode scanner which is placed on the shopping trolley. The overall sum of the products will be added into the final bill and will also be sent to the customer's registered email id and phone number. The customer can choose either payment by cash or any mobile payment application during the check out at the counter.

## **Blood Bank Management System Using Android Application**

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**Abstract** — Availability of blood throughout emergencies is strong vital for each single object. There is a number of online blood donation centers uniting area for efficient contact between them and medical facilities. None of the net blood donation center offers immediate contact between both the donor and them. This may be the big downside of the new framework. The present bridges area unit fastidious; required additional job and large ticket. This paper provides a link between the current bank system and the improved performance structure. The current concerns might grow the effectualness of recent blood banks and facilitate new standard desktop framework to moveable framework. The proposed research each addresses the elements of expanded structure in different ways, such as the details being retained, knowledge provided and obtained by the individuals for potential projects such as relatively blood teams.

## **Mobile Application For Product Showcase using AR**

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**Abstract** — there was a time when we had to go to a house or believe the estate seller who can tell false things about the estate but the days are gone when we had to go to the shop and see the products and imagine about its compatibility in our homes. In this paper we describe an application which uses the concept of Augmented Reality which is multi-platform compatible, is a real world application which uses augmented reality to display a 3D version of the products so that users can view all the smallest of details of the products on their Mobile Devices and place them according to their desire. This application can be developed in the real world. Here, an application is developed which is having voice-controlled functionalities for the AR Objects. The application's creation consists of two steps i.e. Creation of 3D Models from real objects using an image based modeling tool and Conversion of 3D Model into an interactive AR element using an AR authoring tool. Our application uses augmented reality to display a 3D version of the products so that users can view all the smallest of details of the products on their Mobile Devices and place them according to their desire. The application can also be used by voice control for several functionalities like opening, closing the roof, to switch to night time, etc. With this cross platform application, people can see the 3D Model of a house with the angles of user's interest and also with a first person view.

## **The Synergy of Augmented Reality in Education**

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**Abstract**— though augmented reality has been present for several years, it was not popular until the arrival of smartphones with android and iPhone operating systems. The functional Global Positioning System (GPS) with

Augmented Reality (AR) capabilities has a great significance. This project has been designed for creating a mobile application to implement augmented reality into the sector of education, using the tools that are Unity3d, Blender, Android studio, thereby enhancing teaching methods to enable better learning and understanding. AR is often experienced through wired or wireless headsets that folks are wearing and through the smartphone displays. AR technology can manifest objects that are difficult to imagine or conceive. AR can metamorphose them into three-dimensional models thus making it effortless to understand the abstruse and laborious content. Usually this is notably good for ocular learners and essential for anyone to render vague material into important concepts.

## **Android Application Based Smart Parking Using Qr Code**

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**Abstract** — in today's world, parking is an underrated problem and considered as an expensive facility in metropolitan cities during peak hours. This project concentrates on constructing an automatic parking system which is intended to reduce the road traffic in urban areas and decrease air pollution. QR (Quick Response) code can be read and scanned by Android compatible devices and provide plenty of information. This system removes the disadvantages of the existing approaches which use RFID, ZigBee, etc. The driver (user) checks for available parking spaces/slots and reserves the convenient one in that region as per the requirements of the user's vehicle. QR code is generated which encodes the distinctive information and aspects of the user and is used to improve the process of authentication. This system uses a novel algorithm, an android based application that gathers information about the occupancy state of parking slots and thus assists the drivers to nearest vacant parking slot.

## **Online Health Care System**

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**Abstract**— in health-care, Data mining and Machine Learning are proved to be effectively used in areas such as Management of health-care, predicting disease and measuring the effectiveness of certain treatments. In medicinal and health care fields, a huge quantity of information is accessible due to the availability of computers. Our idea is to use the techniques of data processing in the fields of health care to develop correct choices.

## **Medpoint-Medical Health Application**

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**Abstract** — Medpoint is an application which would help to computerize the Front Desk Management of a Hospital, along with digitalization of various other manual services. This application would mainly focus on reducing the time taken by the patient to book an appointment, digitalization of medical records and an easy online consultation with their doctor. This application is being developed to simplify the existing process and make them more efficient.

## A Smart Blind Stick

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**Abstract**— this paper aims at providing assistance to visually impaired individuals to overcome their difficulties in navigation. The proposed system is called a Smart Blind Stick which consists of in-built ultrasonic sensors for sensing obstacles at particular distances and water sensors to detect the presence of water accumulation. On sensing obstacles the sensor signals the microcontroller which in turn calculates the distance and outputs appropriate alerts to the user. The user is alerted through vibrations and buzzer. In addition to this, we have implemented the voice assist feature which will guide the user to take the appropriate direction in case of an obstacle detection. Also, this system proposes a module that tracks the location of the user and sends an e-SOS to his friends or relatives in case of an emergency situation.

## Farming Quad Copter for Spraying Pesticides and Fertilizers

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**Abstract**— Indian cultivation required creation and protection materials to achieve high Productivity. Agriculture fertilizer and substance sometimes expected to kill bugs and improvement of harvests. The WHO (World Health Organization) measures there are more than 1 million pesticide cases in reliably. In that more than one lakh spending's in consistently, especially in making countries in view of the pesticides sprinkled by individual. The pesticide impacts the tactile arrangement of individuals and moreover prompts issue in body. A remote-controlled quadcopter is used to sprinkle the Pesticide similarly as excrement to keep up a vital good way from the individuals from pesticide poison. The quadcopter UAV is worked by manual flight plans and the Sprayer is truly actuated. The vertical take-off and landing quadcopter is used to sprinkle the low volume pesticide in a little locale. Our endeavor depicts the headway of quadcopter UAV and the sprayer module.

## Smart Waste Management Using IoT

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**Abstract-** We as concerned citizens of our country are trying to make our country look more beautiful by solving the problem of overflow of garbage throughout the city. We are trying to implement a system that contains a network of smart dustbins. These dustbins will contain sensors and different modules like GSM module and GPS module to make it easier for the collector to track the real time location and level of the dustbin accurately. It will sense the level of dustbin and prevent the garbage overflow. It will make the waste disposal of garbage easier for the concerned party. We are trying to make it with the help of IOT and trying to make it cheaper so that it can be used easily and vastly.

## An Android based application on Hostel Management System

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**Abstract**— “Hostel Management System” is an online application developed for managing various activities of the hostel. This particular work deals with the problem of managing the hostel and avoiding the problems which occur when carried manually. The efficiency of the system can be improved with this application and it will be very useful for the students and as well as for the staff of the hostel to manage the system. Warden will have full authority to access the student queries. This application is completely digital based and is created through the open source platform Android studio. Firebase cloud storage is used to store the data related to student information, staff details and student queries.

## Evaluating Twitter Credibility

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**Abstract-** Twitter is an American blogging site at micro level and social networking service on which people on the user side post and communicate with pieces of information known as “Tweets”. Ever since Internet usage increased, fake news has also evolved. Fake news can be defined as a news that is false or unreal and that is diffused intentionally or unintentionally. For each Tweet, Credibility can be examined based on two features. The consistency of the information contained in the tweet and its URL in mentoring an event and the number of times the tweet has been retweeted. Credibility is used to detect false information or rumour. In this paper we have proposed the framework to find the credibility of tweets using scores or points given to both twitter user and the tweet.

## Online Voting System using System generated One Time Password [OTP]

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**Abstract** — The One Time Password concept is the main security implementation we will be using, such that every time a password is generated when each user’s login to the system. OTP is sent to his or her mobile phone which basically consists of random digital numbers that changes over the period of time whenever user logs on to perform the operation. The robotized polling forms decisions are known as web-based voting using One Time Password. To provide the security implementation a protocol to this software is developed for the user-based voting system. The implementation has two main parts: The voter section and the administrator section. In these protocol voter section can be found at home or working place or through a device through which they can perform to access the data and grant data authentication. The administrator section executes or permits the functions of voter based on the candidate registration, validation of voter ID, authentication and database the result.

## **Arduino based automatic parking slot detection**

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**Abstract** — The automated parking slot detection system not only finds the empty slot in the parking lot but also exactly denotes the location of the slot in the parking lot. This system uses an arduino to receive the necessary information from the infrared proximity sensor which is placed at the parking slots which detects the presence of the car and if the vehicle is present at the designated slot then the LED at the parking slot will be red and if the slot is absent then the LED at the slot would be green. The arduino is to receive, process and transmit the data accordingly. The automation system we use here is a further improvement on the already existing system which only denotes the number of empty slots available in a particular parking lot where as this additional guidance system to the empty slots is a value addition to this particular system

## **IOT Based Smart Agriculture in Polyhouse**

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**Abstract**—Polyhouse is a modern technique used to grow plants under controlled environmental conditions for the increase in the yield and quality of the plants. The growing of crops mainly depends on internal environmental conditions of polyhouse such as intensity of sun light, temperature, soil moisture, humidity and fertilizers. The controlling and monitoring the climatic conditions inside polyhouse plays a vital role in the good yield of crops. Polyhouse automation is the technical approach , where the farmers are benefitted by increase in yield by smart monitoring the polyhouse and control it if anything goes beyond the threshold value of the environmental parameters, this replace the direct supervision of the farmer. In polyhouse, for proper plant growth the soil nutrient parameters are very important so, the fertilization of the land come into picture. It doesn't utilize the rain water at the time of rains which results in wastage of stored water and the light is the most important source for photosynthesis as it converts the light energy into chemical energy and this is monitored by light sensor.

## **Voice Controlled Smart Switch Board**

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**Abstract**— The system is planned for Home automation (smart switch board) using IOT. The electronic devices such as computers, mobile, tablet can control the home automation features via Internet from anyplace. In this project we are going to implement voice based smart switch board. It will save not only human energy but also electricity (electric power). ESP8266 Wi-Fi module ,5v relay are the hardware used for this projects. The wireless communication is done between the ESP8266 and the electronic devise through Wi-Fi module. User need to pronounce through electronic device microphone instructing the appliances by telling appliances name to ON or OFF. This project facilitates the disable persons to control the home appliances without moving from its position. The limitation of this device are follows: and it always requires internet connectivity and this system fails to work efficiently in noisy environment.

## Voice Based Robotic Vehicle with Obstacle Avoidance

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**Abstract**— The major principle of the robotic vehicle is to examine the user voice command and perform the given user task and without the human presence in particular area can control the robot via user voice input. To control the robot through user voice input it requires android app to communicate via Bluetooth HC-05 module. Subsequently, the robotic vehicle has skill-ability to sense the object and tells the user to keep away from the object with the aid of selecting another way with the help of Ultrasonic sensor module. Therefore, this paper offers mainly for physically disabled peoples. Thereby in future, they drive their own vehicle with a more safety and security from unexpected attempt at sudden hit-and-run cases due to automatic braking or slow down feature. For the hardware, customized Arduino will give the control over the motors that used to run the robotic vehicle. Ultrasonic sensors interact with the Arduino help in automatic braking of a vehicle on sudden obstacle detection.

## Mobile App Simulator

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**Abstract** —The current era is deeply intrigued by the technological advancements, with mobile phones being its ultimate epitome. In this fast-growing world around, Mobile phone technology has helped in developing and moving forward along the curve. Simulating various applications of a mobile phone using a very basic language, (C++) on the platform Turbo C++ using Sequential search algorithm. Linear search or consecutive quest is a strategy for finding an objective incentive inside a rundown. It successively checks every component of the list for the target value until a match is found or until all the components have been checked.

## Emotion based Music player (Emotify)

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**Abstract** — Music has become an integral part of everybody's life. We currently have a variety of music applications that can be connected to the internet and view suggested or related songs based on the playlist of the user, enabling users to exchange playlists and categorize songs into different genres. This paper proposes a system which would help the user identify their emotions through facial analysis and be able to listen accordingly to the best suited songs. This speeds up the process of finding the best suited songs by eliminating the manual work. Our proposed system uses Microsoft emotion recognition for facial analysis, a system that has already analyzed emotions and has the Microsoft Face API which has analyzed over 1 million faces and presents an average true positive value up to 60%. This API helps capture and evaluate emotion from an image in the application. Within this system, computer vision components are used to assess the emotion of the user by facial expressions. The camera of the device captures the user's image. The system can assess the user's emotions and map to predefined playlists based on the captured emotions.

## A Pseudo-intelligent Rock Paper Scissors Bot in Android

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**Abstract**— This project deals with the creation of an intelligent android application that plays the game of Rock, Paper Scissors against the user, learning the user's patterns based on various aspects such as most commonly used inputs and the inputs used in the immediate past. With a custom algorithm, the bot achieves a minimum of a 60% win rate against the average user.

## Digitalization of Hospitals Using Hospital Information System

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**Abstract**— In present developing world many health problems are arising such as HIV, malaria, tuberculosis and some recently swine flu, bird flu and corona have threaten the health and lives of huge number of individuals over the world. The important barriers in providing proper medication and medical care for disease is lack of infrastructure and trained manpower. The aim of this paper is to automate its existing system with the help of computerized equipments and full-fledged mobile application to store valuable information for longer period by allowing easy access and manipulation of the same.

# NETWORK SECURITY

## Vehicle Accident Alert System

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**Abstract** — Over the past few years, the usage of vehicles has drastically increased. The transportation system has undergone a lot of development and the latest technology is being used in vehicles. With the increase in the number of vehicles on the road, the number of accidents has also proportionally increased. The most important factor in reducing the number of casualties in an accident is the response of emergency services. To reduce the time of response, a Vehicle Accident Alert System is proposed that automatically detects an accident and alerts a predefined phone number by sending an SMS (short message service). The system comprises of an accelerometer, vibration sensor, GPS, and GSM module. The heart of the system is the Arduino Uno. A threshold algorithm is used to detect an accident.

## Spam Tweet Detection In Twitter

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**Abstract** — As social networking sites are more popular the spammers uses these sites to keep spam tweets. Twitter is one of the platform for spammers, now the twitter bot is detecting some users and blocking them however it is difficult to block all the users .Nowadays so many users are using twitter, some of the users are spreading fake messages to the users. This type of messages will be seen mostly at the time of elections and any other occasions. The fake messages includes text like your account \*\*\*\*\*2314 is credited with 10000.00 and some other messages like you won a car, initially you have to deposit 20000 to avail this offer. To overcome this we came with a approach for blocking the spam messages with out reaching the user. This can be done by using the Machine Learning Algorithms. In this we are classified the machine learning algorithms and their performance is shown in a graph.

## Cyber Hacking Breaches

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**Abstract** — Various security locals rely upon hard logical issues. Using hard AI issues for security is ascending as an empowering new perspective, anyway has been underexplored. At this moment, present another security unrefined subject to hard AI issues, specifically , a novel gathering of graphical mystery key systems dependent on Captcha development, which call Captcha as graphical passwords (CaRP). CaRP is both a Captcha and a graphical passwords plot. CaRP keeps an eye on different security issues all around, for instance, electronic theorizing ambushes, move attacks, and, at whatever point got together with twofold view headways, shoulder – surfing attacks. Strikingly, a CaRP mystery expression can be found just probabilistically by means of customized online hypothesizing attacks whether or not the mystery key is in the request set. CaRP moreover offers a novel method to manage address the striking picture hotspot issue in acclaimed graphical mystery key structure, for instance, PassPoints, that every now and again prompts weak mystery state choices. CaRP isn't a panacea, yet it offers reasonable security and convenience and appears to fit well with some helpful applications for enhancing the web security.

## Crime Scene Prediction by Detecting Threatening Objects Using Deep Learning Techniques

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**Abstract** — Last couple of decade's security has been a pressing issue and to overcome this, surveillance cameras are installed in several public places which helps in segregating crimes. Surveillance cameras allow us to watch and help in creating a secure society. The data captured using cameras play a vital role in monitoring, predicting events and goal-driven analysis applications including anomalies and intrusion detection. The process followed in providing the input on the crime is to analyze the frames captured by the surveillance cameras and detecting the anomalies and sending an alert message to concerned authorities. This paper aims to put forth a unique method for anomaly detection based on deep learning techniques, which is designed by studying various existing models. Max pooling and ReLU are used in Convolutional Neural Network (CNN).Max pooling is a pooling operation that calculates the maximum, or largest, value in the patch of each feature map. This method has been evaluated using UCSD dataset and showed an increase inaccuracy. Incorporating such techniques can help in crime detection at an early stage.

## Seamless Persistent Storage Availability for stateful application running on Kubernetes platform

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**Abstract** — Containers are rapidly being adopted by all sizes of enterprises which they use them to quickly build, deploy, and scale cloud native applications. Containers, along with containerization technology like Docker and Kubernetes, are used for deploying applications in cloud. Containers are completely isolated environment in which they have their own processes or services like virtual machines except they all share the same OS kernel. Kubernetes is a container orchestration tool which is used to deploy and manage containers. Containers were introduced to package micro services runs as stateless state& managing stateful application is difficult. To solve this issue, where container can run stateful application and store its information we need persistent container storage that is compatible across physical, virtual and cloud infrastructures. The main objective of this project is to leverage Kubernetes platform to create management layer for database service on Ceph Storage using Rook Orchestration. As part of this project, Operator pattern is used in which management layer uses Kubernetes API for infrastructure & ETCD database for persistent storage.

## Cloud Sanitization And Auditing

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**Abstract** - Storage services provided by the cloud gives users the ability to reserve their data in an efficient manner in the storage provider/cloud. In addition to this, by the use of the proposed integrity auditing scheme, the integrity of the files sent by the client to the server can be checked. In some basic cloud storage structures, like student records or office records, some vulnerable data may be present in the cloud file. A third party or other users cannot access this vulnerable data. As a result, if the entire data is encoded, the delicate data would be concealed but it would be rendered useless to other users. In order to address the above issue, we offer a strategy that acknowledges information imparting to cover up vulnerable data. At the moment, a sanitizer is employed to sanitize the given data blocks associated with the vulnerable information and this sanitizer converts the signatures of the physical records into valuable ones. Hence the idea proposed in this paper would give users the ability to

store and utilize the stored documents, and they can easily rely on the fact that their vulnerable data is hidden, assuring that the data integrity is sustained. The assessment of the suggested idea is shown to be functional.

## **Smart Bus Automation using Cloud Sensing Technology**

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**Abstract** — The goal of this paper is to issue tickets using Android device and a wise token for the public transit program. Typically each Bus includes a driver who is going to collect money and give tickets to each passenger. It will still take a lot of your time as manual error formation. A brand new framework is proposed to beat this issue. The IR sensor is used during this experimental program to count the amount of passengers entering the bus. Positive authentication worked here is a rechargeable RFID. It includes database name, mobile phone, and password. Inside the RFID Tag, the RFID user must interpret the information. A notification is sent smartphone to the parties concerned. The consumer will sign in to the destination. The resulting sum of the correct detection is removed. A message is sent to the checker within the nearby station via GSM in case of any accidents or misuses. The condition is being observed using GPS.

## **Enhanced Approach for Secure Stored Data in Cloud**

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**Abstract** — Disseminated registering is nowadays making field thinking about its showcase, high accessibility, ease. In the cloud, different associations are given to the customer by the cloud. The information store is a significant future that cloud association accommodates the relationship to store colossal extents of the cutoff. Anyway, different affiliations are not set up to execute passed on figuring advancement because of nonattendance of fitting security control game-plan and shortcoming in attestation which prompts numerous tests in scattered preparing. The endeavor will bases on, to predict data access from unapproved gets to, it proposes an appropriated course of action to give security of the information in the cloud. This could be developed by utilizing a homomorphism token with a dispersed check of obliteration coded information. The proposed game plan is required to superbly stores the information and sees the change at the cloud server. Also, in the like way plays out a touch of the undertaking like information stimulating, erasing, affixing. Also, it is required to leave behind a philosophy to keep from plot assaults of server change by unapproved clients.

# **IoT and WSN**

## Smart Fitness Trainer System Using Computer Vision

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**Abstract**— Computer Vision is a field of study that helps the computer see images and understand the content of digital images such as photographs and videos. It attempts to understand the 2D space of an image and uses that to learn the 3D nature of the object. Our goal is to develop a trainer system that visually monitors the user's movements for a particular exercise and then provides the accuracy score along as a feedback. In order to incorporate this we use simple Higher-Resolution Net (HRNet) architecture to achieve Human Pose Estimation, also known as Keypoint Detection and an Action Recognition model. Action recognition helps us in recognizing a human action from a video containing complete action execution. Since the action involves spatial and temporal context a 3D Convolutional Neural Network (CNN) is used. The introduced system uses UCF101 – Action Recognition dataset and other sources such as YouTube-8M for collection of the exercise dataset. 3D CNN also makes use of these datasets for training the model and for generating the class scores. The system includes the aforementioned HRNet model and the 3D – CNN for Action Recognition. Initially the system takes the video as an input from the user performing an exercise and then uses HRNet to identify the keypoints of that user or person and simultaneously the 3D-CNN recognizes the action class. Along with it, a keypoint scoring algorithm is used to generate scores for each keypoints or joints along with the overall accuracy of the exercise.

## Survey on Energy Efficiency MAC Protocols in Wireless Sensor Network

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**Abstract**— One of the dynamic and active research area for researchers is on Wireless sensor networks (WSNs). It is popular worldwide in the real time application such as Tracking target and tracking, monitoring in the field of environmental and industrial issues. Usually, deployed nodes work with restricted energy resources. So the parameter energy efficiency becomes one of the objects of exercise for these sensor nodes in the networks. To make WSN more energy efficient, researchers have developed quite a large number of MAC protocols. In this paper, description of various energy efficient MAC protocols of WSNs in three categories: contention based, scheduled based, hybrid are presented emphasizing their strengths and weaknesses. Design proposed by various MAC protocols is discussed. Comparison study is made with various protocols on attributes.

## Effective Scheduling and Queuing Strategy in WMSNs Using Enhanced Equivalent Capacity Model

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**Abstract**— Providing QoS to Wireless Multimedia Sensor Networks (WMSNs), is tough whose principle qualities are network congestion and link failures. A systematic packet planning can enhance the quality of delivery over sensor networks in these conditions. A new packet planning methodology for multipath data movement over WMSNs is introduced here. This method plans movement of variable packets over variable paths. As a result high preference packets are moved through high preference paths after doing timely checks on condition of path. WMSNs are capable of sensing multimedia data that need more bandwidth compared to Wireless Sensor Networks (WSNs). Available methods of WSN do not challenge multimedia applications. So

bandwidth is a major challenge in WMSNs. Proposed novel approach using Gaussian bound is used to compute the effective bandwidth using frame traffic.

## **Rogue Wi-Fi Penetration Framework [RWPF]**

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**Abstract**— These days, a significant number of us utilize wireless innovation, as internet hotspots are being set up everywhere beginning from the home, cafeteria to various shopping malls. Due to the human tendency of utilizing the wireless internet for nothing in the majority of the situations, we straightaway do connect to Wi-Fi networks that are available with no prerequisite of password and neither do we check how secured is that network. This raises the issue of another sort of danger to wireless networks which is called wardriving. As we know, wireless penetration testing is only minimized to a specific radius on-ground operations, and also wardriving has come out of fashion to perform Blackbox testing on a wireless network. Most of the time wireless penetration testing tools are still running on the CLI platform, where all the data will be displayed on the terminal screen and get stored on a document in the backend. So, this kind of output format gives a major gap for real-time analytics. To overcome these issues, we are building a wireless penetration testing device which is operated through a web application that can showcase the data on the web application. Wardriving has also become limited in rural places where a vehicle cannot reach a particular place for the operations of a penetration tester. To overcome this distance factor issue in any kind of locality we are building a drone that can be controlled with the help of a web application other than the use of a joystick.

## **Creating 3D Alphabets Using Augmented Reality**

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**Abstract**— The scheme of design and evolution of an AR (Augmented Reality) application is based for teaching the alphabets to pre-school children's. With the help of AR camera and Computer children could view the superimposed virtual alphabets in a fun and interactive manner. They have options to see the 3D models of an alphabets. An android applications that is able to support the learning of alphabets through 3D models. Now a days, everybody needs a proper education . Some of the parents are struggling to teach their kids to read and write due to their inability to teach them properly. However some kids are able to learn the things very fast but not all the children's could grab the things very fastly. So for those that are unable to learn as fast as other children's so we are using this AR application to grab the attention of the students and also it emphasized interactive learning through play, dance, drama, and also using the Information and Communication Technology (ICT). It also exhibited that fun learning also increases the capability to memorize and understanding of the children's.

## **Enhancing Travel Experience Using Virtual Reality**

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**Abstract**— Virtual Reality (VR) has enjoyed a noteworthy rise of enthusiasm from researchers and organizations generally but also specially from the travel industry. Be that as it may, subjective research on tourists understanding of VR applications is rare Travel/Tourism and Virtual Reality (VR) are a optimal match.VR's aim is to enable users to virtually travel to a desired location before their actual travel. VR is a pleasant review of potential outings, and an extraordinary advertising way for organizations in the travel industry space. The purpose

of this study is to investigate tourists understanding of VR. This paper proposes to build a virtual environment that permits clients to appreciate travel understanding of their ideal destination. This includes an application that utilises the Unity 3D platform for virtual app creation, GoogleVR SDK support for virtual reality experience and APIs for various purposes. Presenting application via VR was found to play a great role in impressing potential guests who get drenched in the story without being there. Many existing VR apps either have information of a desired location or background sound. This paper incorporates both. Further studies must be made to incorporate haptic responses with VR that will help stimulate all five senses and in turn provide an overall travel experience.

## **Immortal Augmented Reality Game**

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**Abstract**— Augmented reality (AR) is a technology which is picking up recently and aims in combining both real world and virtual objects. AR is also described as the Walkman of the 21st century, it has gained immense popularity in the field of games recently. AR not only finds its application in the field of games but even finds its application in various other fields such as the medical industry and film industry. As compared to all the games it is pretty evident by statistics that people prefer to play shooting games than probably games of any other genre. In order to carry this project, we are using a few AR associates like unity editor, android platform. This project revolves around the creation of a mobile AR shooting game covering all the physical movements and providing users a great gaming experience but ensuring players safety. The aim of the game is to create an illusion in the minds of players as though they are really in a battlefield with weapons to defend themselves and conquer the game. The objective is to eliminate all the enemy objects in the game and protect themselves from getting eliminated. This game brings the virtual objects into the real world through augmented reality to make gaming experience more immersive and enjoyable.

## **Grocery Management Using IoT**

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**Abstract**— Today, automation using IoT is growing rapidly and is making everybody's work easier. This paper is an attempt to address the challenges faced in automating the kitchen with focus on 'Grocery Management Using IoT'. Every month, the user has to manually check a large set of grocery items, decide what has to be procured and how much. Instead, this entire process of checking, listing, procuring and storing can be automated using an IoT based Android. Ultrasonic-Sensors are used to read the data. An Arduino board sends data to the central receiver, which in turn sends the data to the server through a local Wi-Fi. When the level of any item reduces or reaches a certain level, a notification is sent to the users' smart phone and the user is presented with a few options to proceed further with. In this approach, the user gets to choose from the heterogeneous variety of grocery items, based on the requirement and frequency of use of a particular ingredient. For every product in the shopping list, the app shows a wide range of subset for the user to choose from, giving more transparency on the product, seller, price, etc. User decides whether to place an order that instant or delay it by a few days or add it to the monthly grocery list. This automation gives budgeting for the present month and also an estimate for the following month as well.

## **Medicus: An E-Medic Consultancy For Hospital Management System**

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**Abstract**—This project is to computerize the Front Desk Management of a Hospital by developing software which is user friendly, simple, fast, and cost – effective. It deals with the collection of patient's medical history and diagnosis details, etc. While the traditional method employs the use of manual power, we aim to make a system to register and store patient and doctor details and assess the database to book appointments and provide prescriptions, whenever the need be. The data is well protected for personal use and makes the data processing very fast to reduce the time taken by the patient to book a hassle free appointment to consult a doctor. System input requires patient details, diagnosis details, while system output is to produce these details on the screen. The developed GUI enlists several user experience features that make the system easier to use. The main objective of this paper is to connect the doctor and the patient very quickly and easily from any remote possible location, without involving any third party members or applications. This system can also be used to notify the doctor and the patient through apps and reminders about the request of doctor's appointment and prescription within the shortest possible time. The improved appointment framework is practical and assists in the decision making of hospital managers.

## **Feed The Needy- An Application For Minimising Food Wastage**

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**Abstract**— The 2019 Global Hunger Index indicates that India is at a serious condition with range of (20.0–34.9) out of 100 points scale. On the other hand lot of food is wasted in restaurants, marriages, social gatherings and hostels, especially when the quantity of food exceeds the number of guests. This project is an attempt to minimize the food wastage by feeding the needy rather than throwing away. "Feed the Needy" is an internet-based mobile charity application to connect receivers and donors. Food donors are typically the owners of restaurants, hostels and party halls, whereas the receivers are orphanages, old age homes and people living in slum areas. When there is an excess food availability, the donor will update the information in the App. As the cooked food spoils within hours at room temperature and becomes unsafe to eat, our app uses Dijkstra's algorithm to find the nearest receiver and send alerts about the food availability. Once the receiver accepts the request, the food availability details along with the location is intimated to the receiver.

## **Food Quality Monitoring System Using IoT**

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**Abstract**— In recent year's food wastage has become major problem due to contamination. This is mainly due to the process of storage methods and lack of knowledge on abiotic environmental factors such as temperature, humidity and sunlight. Hence it is necessary for one to maintain food quality throughout the food supply chain. Effective food quality maintaining mechanisms are essential to safeguard the food quality. Therefore, we have interfaced different sensors to monitor the food products. These innovations have led to improved food quality, usability and food safety. The environmental factors can be monitored by DHT11 sensor and MQ3 sensor that are interfaced with Arduino UNO. In this project the real-time data of environmental factors is collected through cloud and are monitored. If the monitored value of any of the factors crosses the threshold value then the person

monitoring will be notified via sms through SMTP gateway service and he can them through the mobile application.

## **Attendance System based on Face Recognition**

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**Abstract**— Attendance has become one of the crucial methods for monitoring the students in school as well as employees at a workplace. Most of these places rely on the manual method or contact based methods to mark the attendance. The face of a person is what we humans use to recognize or identify a person. Manually updating the attendance is a very tedious task and also consumes a lot of time. So we have proposed a way to use face recognition to mark the attendance of students in school by using the concept of face encodings. The attendance of the students is automatically updated at the end of the day in the database without any human intervention. There are many algorithms available to perform the task. In this proposed system we have used the concept of face encodings which are a part of face recognition api in python. This enables us to detect multiple faces at once and is also a very effective contactless recognition system when compared to iris or fingerprint recognition.

## **Water Quality Monitoring and Filter System to Preserve Water Resource Using IOT**

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**Abstract** — Water is basically to human life and the health of the situation. To launch a virtuous quality of water, it is required a monitoring system which established based wireless sensor network and IoT. Water productions a vastkey role agricultural commercialized originality for drinking recently in order to quantity a support to farmers such as growth of crops and surveillance system physical property, humidity and water supply. Wireless sensor network used to amount water quality by sensing the change of pH. To control quality water over numerous sites as an actual time application, a base station and administer sensor nodes are endorsed a wireless application like Internet of Things (IoT) is used to secondary the nodes and base station. To design and utilize this model power-driven by solar cell Internet of things utilization in this challenging works. Concluded WSN numerous information gathered by various sensors at node side pH, Turbidity, oxygen conjugate are sent base station. At the base station data is composed and displayed as visual in text file. The gain in this system is low power consumption, no carbon discharge, more flexible to outspread at remote site.

## **Digital Driving System For Vehicle Monitoring**

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**Abstract** — Storage services provided by the cloud gives users the ability to reserve their data in an efficient manner in the storage provider/cloud. In addition to this, by the use of the proposed integrity auditing scheme, the integrity of the files sent by the client to the server can be checked. In some basic cloud storage structures, like student records or office records, some vulnerable data may be present in the cloud file. A third party or other users cannot access this vulnerable data. As a result, if the entire data is encoded, the delicate data would be concealed but it would be rendered useless to other users. In order to address the above issue, we offer a strategy that acknowledges information imparting to cover up vulnerable data. At the moment, a sanitizer is employed to sanitize the given data blocks associated with the vulnerable information and this sanitizer converts the signatures

of the physical records into valuable ones. Hence the idea proposed in this paper would give users the ability to store and utilize the stored documents, and they can easily rely on the fact that their vulnerable data is hidden; assuring that the data integrity is sustained. The assessment of the suggested idea is shown to be functional.

## **Ingenious Water Heating Coil Using IoT**

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**Abstract** — In our everyday lives, electric water heaters are very useful. Water heaters are variously referred to as devices for the continuous supply of warm water. Water heaters are also one of the most common solutions for heating household water and the use of this heating coil is a crucial use of electricity. The use of hot water is one example of the use of technology developed for bathing. You can obtain water at higher temperatures using a Water Heater device. Though, the time the heater takes to achieve the target temperature cannot be determined. However, it takes a long time to heat the water to reach the desired temperature and to fill the tub for use. An automatic faucet that can be active in line with the water temperature is designed for this device and which also needs less power and is economically productive. The sensor uses a computer device powered by an Android microcontroller based on Arduino UNO. Also, we avoided any adverse effects due to overheating and less temperature-resistant, which can be caused by short circuit overheating or electric shocks.

## **Design of an Optimum Channel Sensing Mechanism for Cognitive Radios**

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**Abstract** — The radio wave frequency spectrum demanded bands for a large number of users. The limited availability of spectrum does not allow new users to transmit information. Cognitive radio systems use the signal processing and networking techniques to use the unused/unoccupied spaces in the spectrum to accommodate new users in the form of secondary users. Channel sensing mechanism is the first step in implementing cognitive radio systems in which the primary users and the details of their operations are sensed before using the unused spaces. This papers surveys some of the efficient channel sensing mechanisms and proposes a novel method in which the bandwidth and packet drop ratio are used as parameters for transmission by secondary users.

## **Sensitive Data Sanitization along with Encryption and Third-party Auditing**

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**Abstract** — Cybercriminals will be in hunger, looking into the easy links to break the algorithm. Security being the primary essential of anything and everything in this world, it's been more challenging to safeguard the sensitive data of every individual. In the recent trends avoiding data corruption and providing security for our data is of very difficult task. When it comes to the data security in banks, Hospitals, Pharmacy, Organization and so forth is completely crucial. Encryption is on high step to be chosen for hiding the sensitive data. There are many of such encryption strategies that would secure your sensitive data. Sanitization has to be done to recognize the sensitive data either manually or by any automation methods. Considering the drawbacks of many encryption techniques, this paper proposes the AES-256 algorithm. Existing methods only provide private auditing where as,

our proposed system eliminates this drawback too. This paper also stresses on how fast the data is encrypted and how easy it is to control and coordinate the process of encryption.

## **Server Monitoring Using Raft Algorithm**

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**Abstract**— Raft is a sophisticated algorithm that is majorly used for leader election and log replication across the servers in distributed system to achieve the same state and fault tolerance. Currently, raft algorithm is used for server health checks in distributed systems but not for monitoring. Beside only sending the health status we are sending the CPU and memory utilization of the server. Raft isolates the key components of accord, for example, pioneer political decision, log replication, and security, and it upholds a more grounded level of coherency to diminish the quantity of states that must be thought of. Results from a client study exhibit that Raft is simpler for understudies to learn than Paxos. Raft likewise incorporates another instrument for evolving the bunch participation, which uses covering greater parts to ensure wellbeing.

## **Dynamic Intelligent Virtual Assistants Based on User Preferences**

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**Abstract**— When we talk about “Dynamic Intelligent Virtual Assistant” (DIVA), we are trying to imply about a virtual assistant which is more dynamic than any pre-existing virtual assistants present and is more personalized in understanding its user. The reason for making this virtual assistant came from our observations as to how the present assistants fail to adapt uniquely to different users and their needs or preferences. Our virtual assistant aims at having a higher learning curve of the user preferences so that our assistant’s interaction is different for each user. Our assistant not only includes all the basic features of the present-day assistants but also has more personalized features such as “Time and activity tracker of the user”, “learning about user’s preferences with some guidance”, etc. The DIVA is effectively implemented to demonstrate its operation of user assistance based on personal preferences learning.

## **Design and Implementation of an Intelligent LPG GAS System**

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**Abstract**— LPG(Liquefied Petroleum Gas) is one of the most important requirements of today’s lifestyle for households. It is also used in Cars, Hotels, and factories. These LPG’s also has drawn backs that if there are minor leakages in the cylinder or pipes it would lead to huge disaster and it would take the life of many people. So, we have come with this paper that would detect the leakage of LPG and alerts the user and auto booking the cylinder. The paper aims to detect the leakage of LPG and alert the nearby people with the buzzer and to send SMS to the user along with APP notification. We are using the MQ135 sensor to sense the leakage as soon as the leakage is detected it will send the values to the Arduino. The Arduino will send the signal to the GSM module to send SMS along with it will buzz the alarm and the same data is sending to the cloud to notify the user with app notification also. The same paper will help in the auto booking the cylinder for this we will use load cell when the weight reduces to the specific weight then call is done to a toll-free number to book cylinder is booked and the booking reference number is saved in the app for the reference of the user. This work will help the people in identifying

the gas leakage and also it will help the user and agencies in booking and recording the cylinder booked details using IoT technique.

## **Vijayank-A Smart Spectacle For Differently Abled People**

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**Abstract**— In the world full of growing technologies and innovative ideas there are some disabled people like a deaf, dumb and blind who are facing different problems in their daily lives. Blind people have difficulty to avoid obstacles. Deaf and Dumb people are fighting for finding an innovative way that can make communication easier for them. In this paper, we are introducing a new system-prototype called the VIJAYANK (Spectacle device) to assist differently-abled people. The VIJAYANK spectacle device will make use of the Wearable Technology which consist of an ultrasonic sensor, IR sensor, flex sensor, camera (To record gestures) and buzzer/speaker, Texas Instrumentation Circuitry, APR9600 audio recorder (For DEAF) and concepts of computer vision and machine learning to detect the obstacle (FOR BLIND) and to record the gestures (FOR DUMB). Deaf people able to communicate by using the speech recognition module and LCD. All these are included in one device so that this device is useful in the communication of the people suffering from any of the possible combinations of Blindness, Deafness, and Dumbness. In this paper, we will be proposing a new idea that could sever all the problems faced by the handicapped and also fulfil the voids to greater heights.

## **Automatic Garbage Collection-Using Robotic Vehicle**

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**Abstract**— According to the current system for the collection of waste materials and garbage from dumpsters, there are some limitations, such as time-consuming and less efficient waste management, which is now a difficult task for municipal corporations. This paper presents an automatic collection and monitoring of garbage using IOT. In different parts of the city, the garbage dumpster is kept in different public places and along the roads where it is overflowing due to an increasing waste system and lack of monitoring. It creates an bad and unhealthy environment, many diseases spread around the environment that are hazardous to our health. So this problem can be solved by using sensors that are kept in place to monitor the overflow of garbage dumpsters so that it is easy to determine which dumpster is full. When the garbage level reaches the threshold, the controller sends an RF signal to the vehicle. Once the vehicle receives the RF signal, it starts and moves to the garbage dumpsters and stops below it, and the controller activates the dumpster engine to drop the garbage inside the vehicle, and then the vehicle moves to the next dumpster. The entire process is fully automatic, but for the safer side it is also possible to control the vehicle via Bluetooth in manual mode.

## **Application based Smart Parking Reservation System using OpenALPR**

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**Abstract**— This paper discusses on smart parking system for slot reservation based on image processing technique and electronic parking fees collection based on OpenALPR. The aim of this project is to develop and implement an automatic parking system that will increase convenience of the public car parking zone as well as collecting parking charges without interference of humans. The proposed system processes the frame drawn at parking lot and produces the information of the empty car parking spaces. Cars can be allotted a slot based on the availability of parking lot. When the slot is vacant, it is made digitally available and helps the user discover it through our web-based application. In addition to that, it has an infrastructure where people can open our

application and book a slot prior to their visit to that place. The system uses a camera as a sensor to take photos to show the occupancy of car parked. It then uses OpenALPR algorithm method for license plate extraction from car images and respective billing system to calculate the parking charges. The parking charges can be paid through application.

## **IoT Based Black Box Device For Vehicle Tracking**

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**Abstract**— The main objective of this project is to develop a prototype of a device which can be installed in any vehicle. It plays a key role in investigation. The inputs from victims, eye witness and police reports may not determine the reason properly if it is a problem internally. That's why it is important to have a data what goes on in a vehicle at the time of accident. This device can be built using minimum hardware components. This device sends a SMS (Short Message Service) which consists of a data like Speed at which vehicle was travelling, Pressure at which collision happen, Temperature of the engine while collision, All these parameters are used in vehicle crash investigation. This is sent to a registered number to prevent delay in rescuing the victim by providing the medical emergency at proper time to prevent from any causalities happening.

## **Raliway Gate Control System Using Buzzer**

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**Abstract**— In this developing countries accidents in the unmanned level crossings and due to obstacle on track are increasing day by day. Our project deals with automatic railway gate control at a level crossing replacing the gatekeepers and detection of obstacle on track. By implementing the system at the level crossing the arrival of the train is detected by the sensors placed in the side of the tracks. Hence, the time taken to close the gate manually is less. Detection of obstacle on railway track deals with two things, first it senses the objects on the track by using sensors which is placed on front end of train. Our system uses sensors to detect the arrival and departure of trains at the railway level crossing, IR sensor to detect the obstacle and Arduino control the opening/closing of gates and train speed as well. They are many incidents that take place at level crossing many lose their lives, people injured for life time This motivates us to work on this project.

## **Assisting farmers in optimizing their crop yield**

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**Abstract** — Effective Cultivation and yield of a crop depend on the type of soil, crop selection, water availability, and weather condition. Farmers face many challenges to identify the crop that best suits their land. In this paper, we propose AgriBot, a farmer's assistant that captures various dependent factors of the agricultural land and predicts the best-suited crop that maximizes the yield. AgriBot moves along the field to capture all the parameters that impact cultivation. The exact location of the bot is known using Geotagging. It uses various sensors to capture temperature, humidity, pH, moisture level in the soil and uses image processing to identify the type of soil (black soil, red soil, etc). On the captured data, predictive analytics is applied using Artificial intelligence to suggest the crops that could be grown and their ideal conditions. AgriBot's web app uses the Government's API to display various agricultural schemes, daily prices of agricultural commodities in different markets, etc.

## Self-Driving Car Using Image Processing and Neural Networks

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**Abstract**— The main idea behind the entire self driving car is to make the travelling between any given places easier, safer and hassle free. The amount of self driving cars that are being developed around the world is increasing at a rapid rate. We have made it possible by using hardware such as Raspberry Pi, Arduino Uno, L293H motor drivers, car chassis kit and PCB. The software which we are using are Arduino IDE and Raspbian OS. OpenCV and Neural Interface are some of the packages that are used. The car that we are developing can perform the following features stop sign detection, lane detection, traffic light detection and changing the lane if an object is present in front of it. The self driving car can be used everywhere as this car reduces the amount of pollution that is happening around the world.

## Finger Gesture Mouse Using Open C V

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**Abstract**— Whole idea behind the whole finger gesture mouse is to make the work of human much easier and better with Human Computer Interaction, thus reducing time computing and to increase the user comfort during the use of system. It is possible with python OpenCV, PyAutoGUI and NumPy packages. We have developed a PC application which is used to follow the color finger gesture and then execute the application accordingly. This is an alternative of physical mouse. This can be used at all the places where reaching to a physical mouse is a bit difficult and inconvenient.

## Real Time Drowsiness Detection Using OpenCV

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**Abstract** — The project is designed in the prime motive to design a non-invasive model which senses and favours us to figure out the fatigue of an employee. Due to the drowsiness of an employee they're not able to meet the deadlines of the company deals provided to them on time and leads to the rise of cost of company. This system will be implemented to track employee eyes using small camera and algorithm together. By this, we will be able to follow up the indications of drowsy employee and keeps him from sleeping. This project contributes in determining fatigue of an employee in advance and will alert him with a notification or beep alarm. In order to accomplish the desired end product, we make use of an open source library i.e., OpenCV which is a very efficient tool for processing any visual image and there is another package which is made use to recognize the region of interest which in our case are face and eyes. This tool is known as Haar Cascade. The warning will be deactivated only after employee wakes up and his/her eye close/open state remains constant for more than 6sec

## Card Authentication Using Biometrics(Face)

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**Abstract**— This paper proposes a method for purchasing or transferring money using credit or debit cards which uses biometrics for authentication. We use facial recognition as biometrics for authentication. The algorithm we used is Haar cascades algorithm from OpenCV library. There are few problems faced by the credit and debit card users such as cloning of the cards and obtaining the secret pin using the brute force technique. These frauds are more common in cases like losing of cards or the transaction that are done in public places like restaurants or malls etc. Our proposed method will be able to control few of these frauds by using facial authentication techniques. This system works in the following manner the algorithm matches the face of the user who is accessing the card and with the collection of data sets which are available for that particular card holder account in the database. If the face is matched then the transaction will be accepted, if not the transaction will be denied.

## R.O.H- The ultimate device for your safety and security

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**Abstract**—In view of our country's current situation, and taking into account the events that have taken place over the past few years, people's safety, is at stake. This paper proposes a reliable, lightweight, and cost-effective solution. The main aim of our paper is to provide immediate help and safety, for the welfare of people. At anytime if an individual feels he/she is in danger, then they just have to press the button of the compact device mounted on a wrist band. If the unit is triggered, it starts monitoring the person's current location with the aid of a Global Positioning System and sends a warning message to the already registered mobile numbers via Global System for Mobile communication and, hence to the cops. It also has a camera installed and a buzzer that makes the device stand out.

## GPS and IOT Based Soldier Tracking and Health Indication System

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**Abstract**— The paper reports an Internet of Thing (IOT) based health monitoring and tracking system for soldiers. The proposed system can be mounted on the soldiers body to track their health status is wireless and track their current location through (GPS)global positioning system. So that directions can be easily found wirelessly. The security of the any nation depends on military, army; air-force and navy are main source of the country. Hence with the use of proposed equipment, it is possible to implement a low cost mechanism to protect the variable human life on the battlefield. The GPS is also inserted to track the exact location of the soldier and base station can guide the soldier. This device is fitted in the soldier army suit when he was in the battlefield with the firearms. The main aim of the project is to design and develop user friendly IOT based solution to the doctor in the real time environment.

## Implementation Of Smart Farming Using MI And IoT

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**Abstract** — The Main Aim of this project is to boost the potency of the Agriculture sector. Different weather parameters area unit taken into thought with that the simplest appropriate crop to be fully grown area unit foreseen with the assistance of supervised learning like call Tree Classifier, Regression and SVM. Facilitate of various sensors, the soil and part conditions area unit determined and transferred to machine learning algorithmic program and analysis present itself. The only answer to {the current} downside is sensible agriculture by modernizing the current ancient strategies of agriculture. thence the project aims at creating fashionable agriculture victimization automation and IoT technologies victimization raspberry pi and machine learning. With the assistance of IoT alongside Machine Learning within the field of agriculture. Will area unit able to increase the yield of the crops and during this system even we tend to are intimating the farmer regarding natural disasters so he can take safety preventative measures. . The result of crop prediction is given through a mobile app and the intimation of natural disaster is given through normal sms so it would be user-friendly.

## IoT Based Smart Surveillance Security System using Raspberry Pi

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**Abstract** — Communication is nothing but transfer or exchange of data. Exchanging the data can be done using Internet of things (IOT). The internet authorized devices are used by nearly about billions. Main motive of this paper is to describe an alerting device handled by internet of things (IOT). This makes it easier in observing and also alert as soon as motion is detected. Internet of things can also be used to detect motion, gestures, and actions to indicate warnings when any kind of motion is detected. Images are captured when motion is detected and it is sent to cloud server and there will be a notification sent to the specified email as the motion is detected. Raspberry Pi is used with open source computer vision software for image processing. Control algorithms are also used for watchfulness so that as soon as motion is detected the monitoring and images are captured properly.

## An Intelligent Aid For Visually Impaired-Obstacle Detection And Content Recognition System

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**Abstract**—Across the globe, there are 15 million visually impaired people and they cannot move confidently, independently, and safely in this world. These people are restricted to their neighbourly surroundings. Also, in order to perform their basic tasks they need continual assistance. There are some of the products which are already present in the market, which provides some features that can help in assisting these peoples. However, these features come independently over several products. To overcome the hardship of using these products independently, we have come up with a device which is an absolute set of features that help visually impaired people to perform their basic tasks such as walking through streets, navigation in public places and seeking assistance seamlessly, safely and confidently. Our proposed system consists of features like obstacle detection, voice based interface, navigation and Intelligible Content Recognition (ICR). This system makes use of technologies like CNN (Convolutional Neural Networks), IoT (Internet of Things), various sensors. In addition, the proposed system is designed, by using materials which are of lower cost.

## Effective and Efficient Rainwater Monitoring and Control System

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**Abstract** — As we all know that water is an important resource for life and its existence. Nowadays water scarcity is nearly in every corner of the world and to overcome this problem collecting of water and storing it for several other purposes is being practiced. Rainwater Harvesting is one of the method to overcome this problem and this method is being practiced from a long time back but in our project we will be mainly working on how we can effectively & efficiently manage the water which is stored from the rain in a container/tank and use it when required. The system developed can measure the water level and several other parameters of water for the supply and can provide update through alert message as well as store the data to the cloud and anyone can remotely access the data which is stored in the cloud. The hardware components which we will mainly be using is Renesas Microcontroller, Relay, PH sensor, Water Pump, LCD and thus making our project more simpler and easier for the people to use.

## Weather Based Smart Fan

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**Abstract** — At present state we are wasting electricity somehow or the other. One of the examples, of this is a living room fan which runs at a constant speed until changed manually. To protect and safeguard one's future we need to save energy. This system is based on a mechanized fan actions/speed controller using Arduino which authorizes actions/speed of the fan based on sensed temperature. Using Arduino microcontroller, it establishes authority and fast processing of all the devices attached to them (sensors and LCD display in this case) to obtain data and allows faster display of data in real time. LCD makes the weather monitoring system so much more convenient and straightforward. Temperature obtained by the sensor and speed of the fan are exhibited on the LCD. Arduino microcontroller is the main hardware in the electrical system, which commands all of the tasks. DHT 11 sensor is a very fast and effective temperature and humidity sensor and it convert the data into transferable signal and forwards it to Arduino microcontroller, which is then displayed on LCD in real time. Transistor is used to control the speed. Further it can be used with other applications like air-conditioner, heater, cooler, incubators, etc.

## IoT Based Smart Energy Meter for Smart Usage of Electricity

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**Abstract**—In this paper we deal with the measurement of individual power consumption of the appliances using MCU and updating the information on IOT cloud using a Wi-Fi module. Over the last few decades the consumption for electricity has increased exponentially. The method that can rig today's drastically growing energy issue is by downsizing household energy utilization. This has elevated focus for the need of precision and economic methods of power measurement methods. The aim of building this energy management system is to optimize as well as reduce extravagant consumption. Therefore, in the proposed model we provide the users a web portal which is available over desktop and mobile platforms and serves as an energy management system through which they can access details of real time energy consumption in their day to day life. We have made use of Arduino Uno REV3 microcontroller which is interfaced with the energy meter.

## Smart Home Automation using a Voice-Bot

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**Abstract**— Through ongoing years, electronic devices identified quicker development in area of IoT along with remote Home automation framework. Be that as it may, the high use of these gadgets limits numerous clients to utilize highlights of these advancements. In this paper, The Alexa AWS has utilized also cloned by Raspberry Pi 3 along Microphone. Anybody with a web association over whatever product will build a new Amazon Echo Dot. Which is nearly less expensive over purchasing the industrially accessible gadgets. Practically any speaker can interface with this system to build a voice-controlled smart things platform. Our work encourages users for investigate the Internet of Things without going through a lot of cash. The introduced framework incorporates family machine control, theater setup, home office checking along house guardance. And managed through advanced mobiles and Alexa Voice Services (AVS) with Amazon Developer Console upheld over Amazon.

## Waste Management Using Reward System

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**Abstract**— The planet has undergone tremendous stress since the beginning of the industrial revolution, the invention of plastic, boosted the manufacturing industries. Plastic is inexpensive, versatile, strong, flexible, waterproof non porous. Due to this, plastic is used on a large scale to develop and manufacture even the most basic products such as plastic covers, bottles to space equipment. The success and dominance of plastic as a goto material for varied commercial products created concerns of environmental pollution. Currently, plastic pollution is one of the major threats to the environment and wildlife. Recycling is opted as a measure to reuse and repurpose plastic. The main challenge of the scenario boils down to the collection of plastic, governments have to deal with littered plastic which proves to be difficult. This paper addresses this problem of plastic waste management and proposes a solution using IoT and introduces the concept of rewards which will motivate proper waste disposal.

## Efficient Public Bus Transportation for Smart City with Amazon Web Service Interface

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**Abstract**— The way in which commuters plan to travel becomes more decisive currently based on multiple attributes like Time, Comfort, Cost and Environment, which may lead to choosing public bus transportation as most efficient. However, this requirement leads to having public bus transportation with Smart seating management. Having this helps the public to be comfortably available for work, classes and other activities which supports availability over network during the Commute as well. This explores to use different technologies. The Solution to the above problem can be achieved by designing the system which can be embedded inside the bus. The System Consists of distributed IoT methodology design, Microcontroller, GPS (which provides location of the bus) and IR Sensors (Number of commuters inside the bus) information available over GSM/GPRS Network. To overcome the drawbacks of currently available assistive device, this system proposes RFID READER which reads the bus information and TAG which is embedded back of the bus Seat that helps to identify whether seat is vacant or filled. The above-mentioned information is available, dynamically fetchable in real time when a User interfaces in Amazon Web Page with registered credentials.

## Voice Based Home Automation using Raspberry PI

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**Abstract**—IOT is technology that is changing the world in a rapid way. Many technologies are integrated with IOT and lot of technologies have been developed which has created an impact on the present world. In this project we are making use of this technology along with the hardware and required software and developing a smart home where the devices can be controlled by using an android application. Raspberry pi has an inbuilt Wi-Fi module which is used as a communication protocol between the android application and the devices. Here we are using the relay driver to connect the devices. The motto of this project is to develop a smart home which will be helpful for the people to use their devices efficiently. This project can be helpful for the people who cannot do their work efficiently like physically challenged and old age people.

## Smartonus - A home security surveillance system

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**Abstract**— Security has regularly been a pressing issue with our home or workplace. The objective of the work is to aid the user with an easy and custom technology to effectively manage guests flowing to his/her premises. An overseas home security system offers more advantages aside from keeping home homeowners, and their property, safe from intruders. It allows the users to observe guests in real time via the sensible push button put in close to the doorway. The bell is connected to a camera. Once somebody presses the bell, the person's face is captured. The captured faces are cross documented with the database. If the face is recognized a particular OTP would be sent. If there's confusion within the face recognition then another security possibility pops up. This is where we tend to use voice automation to upgrade the protection level. An exact speech has to be spoken by the person if it matches with any of the info index, and then a particular OTP is distributed to the person. If someone rings the bell and fails both the face recognition and voice automation then they're mechanically connected to the house owner. A pic of the person's face would be sent to the house owner and the voice automation would allow them to have oral communication. The house owner will then opt to allow them in if they recognize who it is or they will decline the request to enter the house. This technique is used to benefit the elderly to spot the unauthorized people. The technology rate is always growing and expanding and with that in mind, we need to keep up with the technology and update our home security system to make our life safer.

## Virtual mouse operation using hand gesture

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**Abstract**— Computer technology is the most basic and important aspect in every human's life. The basic hardware in computer is the mouse. Human Computer Interaction (HCI) is totally depended upon the hardware component. Many of the researchers worked on this component to make the users work easier and efficient. Therefore this paper regards about the usage of the hand gestures instead of the mouse. Gesture is a topic in computer science and language technology with a goal to interpret human gesture through mathematical algorithms. These gestures can originate from any bodily motion or state but are mostly considered from face and hand. The proposed system does not use any of the external devices. It is not bound to any Bluetooth device nor the network devices. Instead the gestures are identified using the webcam or built in camera. Then the colors are processed with color detection and segmentation technique. Using this system the user will be able to control few of the mouse operations on their machines. The operations are left click, right click and double click and dragging

a file or dropping a file. Actions are achieved by using movements of fingers with color caps in different gestures. This would eliminate the usage of mouse and could only be operated by movements of hands. Finally this project helps in the better development in Human Computer Interaction (HCI).

## **Healthcare monitoring system for Elderly or disabled persons using IOT**

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**Abstract**—This design represents the usage of IoT in health care system. This design introduces a wireless health monitoring system that can monitor a human 24x7. This system consists of a number of the part. Controlling and data processing is done through the Arduino Uno board, all the sensors are connected to Arduino UNO. Through this system, we can measure ECG, heartbeat, BP, and spo2. Through sensors, it is possible to measure all these values. Here all the sensors are powered using a solar power system. All these analog sensors can be connected to Arduino through any of the six analog pins. These values are then used for detecting any critical situation. In the case of a critical situation, an alert can be given as a message. Also, it is possible to monitor the person's health from any location in the world through the Thing speak cloud. Data from sensors is uploaded to Thing speak periodically without any interruption if internet is available. Here ESP8266 wifi module is used for connecting Arduino to the internet.

## **Smart dustbin using Internet Of Things**

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**Abstract**- The concept is straight forward and driven by a fact that the dustbin requires very regular cleaning. This results in unhealthy environment and disease unfolding. The aim is to accommodate additional and obtain the bin clean timely using alert warning services. In many locations, the Municipal garbage bins square measure overflows and they do not appear to be clean at the right time. As a result of which the consequences are severe. It involves overflow of garbage that ends in soil contamination, disease unfolding, together it produces insanitary conditions for people, and appearance in it. To prevent all these issues we prefer to suggest a solution to this disadvantage is smart Garbage Bin, It is capable of telling the authorized individual once the garbage bin is on the verge of overflowing and to create Arduino, buzzer and inaudible [Ultrasonic] detector for peep sound victimization

## **Border Security Intrusion Detection using IoT and Embedded Systems**

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**Abstract** -Borders are highly prone to intrusion. It is difficult for the soldiers to monitor the border areas consistently and tirelessly. Hence it is essential to build a system which will reduce the effort of a soldier. Life of a soldier is precious and fragile and should be treated as such. This proposed system aims at reducing the workload of armed forces. The proposed portable model consists of Passive Infrared sensor (PIR) sensor, cameras that will detect motion of the intruder and notifies the control station and the buzzer that self-activates to warn the intruder being in a restricted area. The whole networks of sensors are connected through Internet of Things (IOT) in the border site. The live streaming and face detection feature using Raspberry Pi allows the admin to categorize authorized and unauthorized personnel and make decision precisely. The system also incorporates an electric fence and a gun and can be operated manually to take action against intruder. The set-up will work alongside the human soldiers acting as a helping hand hence assuring protection of the borders.

## Fuel Monitoring System for Vehicles Using IoT Technology

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**Abstract**— In this rapid changing world, it is difficult to monitor and collect the data of fuel flowing inside the fuel tank and maintain all the records. It can be overcome with the help of this fuel monitoring system we can monitor and keep records of the fuel filled in the fuel tank. This is done through remote monitoring. This type of system is used to measure the quantity of petrol, diesel and any kind of liquids. The purpose of this device is to prevent the scam in the petrol stations where in some cases the amount of fuel displayed in the machine is not the actual amount of fuel flowed inside the fuel tank. This happens in very few petrol stations as the machine is diluted by the owner or the operator of the petrol stations. Hence, when this fuel monitoring system is installed it prevents the customer from getting cheated.

## Q-Learning Novel Routing Algorithm in Wireless Sensor Networks

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**Abstract**— Wireless sensor Network (WSNs) has become a hot research point in view of their different amphibian applications. As the submerged sensor hubs are controlled by worked in batteries which are difficult to supplant, expanding the system lifetime is a most pressing need. Because of the low and variable transmission speed of sound, the structure of solid steering calculations for UWSNs is testing. Right now, propose a Q-learning based Novel Routing calculation to expand the lifetime of submerged sensor systems. In Q-learning based Novel Routing, an information assortment stage is intended to adjust to the dynamic condition. With the utilization of the Q-learning procedure, Novel Routing can decide a worldwide ideal next jump as opposed to an avaricious one. We define an activity utility capacity where leftover vitality and proliferation delay are both considered for satisfactory directing choices. In this way, the Novel Routing calculation can broaden the system lifetime by consistently conveying the leftover vitality and give lower start to finish delay. The reenactment results show that our convention can yield almost a similar system lifetime, and can diminish the start to finish delay by 20–25% compared with classic lifetime extending protocol.

## Traffic Control System Using Image Analysis

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**Abstract**—The project is made to develop a Traffic control system using image analysis. With the world heading towards development of cities one of the major concern problems faced by all cities is intense road traffic congestion. Traffic congestion has been creating many critical problems in most populated cities. Due to these congestion problems, people lose time, miss opportunities, face a lot of Problems. The traffic light duration in the earlier methods have been constant which turns out to be a big drawback. The system what we are using now is based on a timer system, which is constant in every situation. This paper attempts to address the problem of traffic congestion caused at traffic signals. Traffic control is based on density of traffic which improves the traffic control system by calculating the density of vehicles on the road.

## Vehicle Unlocking System based on Face Recognition

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**Abstract**— In the past few days, having a vehicle with a robust security system that can protect our privacy is essential. Many vehicles are regulated by people for opening the vehicle using keys, countersigns or patterns. The goal of this project is to assist users with the use of face detection and recognition to improve vehicle protection in sensitive locations. The program provides image identification, face detection and recognition, email feedback and automatic access to the vehicles. Face Recognition is achieved using OpenCV, the database will store tons of facial images of people. Therefore, the vehicle lock can be opened remotely from anywhere using IOT android app. The captured image from camera will be sent to the designated individual for safety purposes via email.

## An Efficient Flood Identification and Cautioning System

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**Abstract**—IoT is the latest increasingly expanding technology in its use. The Internet of Things Technology (IoTs) is greatly influencing the development of early warning systems, while the methods of machine learning (ML) have greatly contributed to the advancement of prediction systems which provide better performance and cost. Flood is an inevitable naturally occurring phenomenon that causes high traffic flows and can also cause substantial property and livelihood harm. This is why we have built a flood warning system to track rising water in different regions and a prediction system in which we collect data sets to predict flooding in a dam. The flood height is set by subtracting the sensor peak as regards the ground minus the sensed range between the sensor and the flood water. Water level height alerts will be provided to alert the authorities on the website. The data uploaded to the website will also be used to train our model to predict flooding in the dam. This project aims to realize the security requirements and security architecture of Internet of Things technology for flood identification and cautioning and discusses the demand and overall design of flood management.

## IoT based Baby Monitoring System for Smart Cradle

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**Abstract:** Now-a-days employing mother has greatly increased. Looking after their babies is a great work for many families. Due to this many mother will tend to send their babies to their grandparents home or to baby care takers. But, the parents will not be able to regularly look after their babies' condition in normal and abnormal circumstances. Hence, an Internet of Things-based Baby Monitoring System is fabricated as an adequate and low-cost IoT-based system for monitoring in present situation. We have also included an algorithm for our system that plays a good role in giving better baby care when parents are away. In this fabricated system, Node Microcontroller Unit (Node MCU) Controller Board is included to group the data read by the sensors and uploaded via Wi-Fi to the MQTT server. The fabricated system has sensors to supervise the baby's important parameters, such as ambient temperature, moisture, and crying. The fabricated system has baby cradle that will automatically swings with the help of a motor whenever the baby cries. Parents could supervise their baby condition with the help of an external web camera and switch on the lullaby toy kept on the baby cradle remotely via the MQTT server to entertain the baby. The designed system prototype is fabricated and tested to prove its effectiveness in terms of cost and simplicity and to ensure safe operation to allow the baby monitoring anywhere and anytime through the network. Thus, the baby monitoring system is verified to work in efficient way in monitoring and controlling the baby's condition and surrounding conditions related to the prototype.

## Self-Driving Car Using a Simulator

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**Abstract**—This paper focuses on the implementation, architecture and on-going design of a vehicle when it encounters with an object. The vehicle is driven, guided and controlled by utilizing an array of sensors and software. Many collision warning and avoidance systems were made known at the beginning of 21st century but automobiles won't necessarily be able to make judgment whether it is a child or an empty cardboard box which can be avoided. Collision can be avoided depending upon the interaction between the human and the car. Firstly algorithms were used to reach the destination. When a car encounters a collision, it naturally comes to a standstill or identifies the vehicle's next position or lets the vehicle go past it. There are two applications which are highlighted in this paper, one in which there is one route and the human driver takes control of the vehicle and the other one where the human does not interact with the vehicle.

## IoT Based Smart Helmet To Detect The Hazardous Situations And Accident Alerts

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**Abstract**— At present, India is the biggest marketplace for 2- Wheeler's (China being 2d) within the global. further India is still developing country according to mining industry lots of injuries happens while in working. this leads to sometime serious issue and deaths also. the main reason of both domains are not Wearing the helmets properly. Therefore helmets must be used while riding the motor cycle and working in mining industry. by using this a person or victims get some proper medical help and delivering the alert message to registered mobile number. so for this am developing the smart helmet to make the journey and working safer and more comfortable. Smart helmet provides the complete safety measures while include both accident detection and mining industry purpose also. smart helmet consist of sensors GSM, GPS module, crush sensor strap switch, MQ3 and MQ7 sensors each of sensors does there jobs independently generates SOS messages. smart helmet promotes the user by its features like connectivity with a phone using GSM technology and detecting hazardous situations,gases,CO2 percentage, crush of an object, strap status,. Etc

## A Survey: Solar Powered Iot Based Smart Garden/Agriculture

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**Abstract**- In current digital world, a person anticipates automation which can make the work simple and easy. In this busy world a person has the problem of remembering many trivial things one such is watering their plants in the garden regularly as per the requirement of plants for their better and healthy growth. The main idea is to adapt current technology instead of our old system so that the latest automated system provides sufficient water for farming, home gardening, etc could be achieved. In the current scenario people expect their daily activities to be automated which make their chore convenient and efficient, IoT is one such platform that focuses on human comfort. IoT mainly targets to combine everything in our world under one system or framework. It can be used to manage things and can also keep us updated constantly with current situation. Internet of Things comprises of various devices which can connect to internet and exchange information with one another and sends that information to the user. The proposed system uses Ultra sonic sensor for examining the water level of tank and soil moisture sensor to detect the water content of soil for automated supply of water using solar power.

## IoT: Empowered Alcohol Sensing system for Safety Driving in Two Wheelers

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**Abstract** -Driving under the influence is starting at now a certified general clinical issue, which is presumably going to rise as one of the most noteworthy issues now. The framework targets decreasing the traffic mishap in the near future due to inebriated and drive. The advancement in utilizing the liquor detector ,a gadget that detects an adjustment in the alcoholic pollen gas substance of the encompassing air these gadget is all the more ordinarily alluded to as a breath investigation, as it examination the liquor content from individual's breath. The framework recognizes the nearness of liquor in the rider and promptly bolts the motor of the vehicle.

## Automated Solar Irrigation System

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**Abstract** — Automated Solar Irrigation System is planned and manufactured. This framework traps free vitality from the sun and stores it in the battery and afterward changes over this sustainable power source to the rotating current. It makes vitality usable in farming field to siphon the water through siphon. The Solar Irrigation System vitality water system framework can be feasible option for ranchers in the ebb and flow condition of the vitality emergency in India. So the Automated Solar water system framework is utilized in horticulture field, sunlight based vitality is utilized to produce power, contingent on the dirt sort water is given to the plants. These days, for water system various methods are utilized to build the yield of harvests. In our task, pivoting sun based board is utilized to watch the sun powered vitality to create the power, and furthermore temperature and mugginess sensors are set close to the plants and this sensor data are transmitted to LED. This information is shown on the LED Display. This framework is intended to detect the earth of the field to water the harvests. Any mistakes at programming and equipment will be controlled and dispensed with. Our framework is tried for its constant responsiveness, dependability, security and solidness, our framework is intended to be impervious to climate, temperature and some minor mechanical anxieties.

## Smart blind stick pro

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**Abstract**—Planet consists of several people one of whom is visually disabled people. Currently, the World Health Organization estimates that 76 million visually disabled individuals are still alive in the world. As a normal human being able to leave his or her life alone, however visually disabled people are dependent on him or her to fulfill the basic needs. This society becomes increasingly evolving, a range of new technologies have been developed that enable blind people to sustain their lives without being dependent but it still has its pitfalls. So we are suggesting a workaround in this to introduce a highly innovative and inexpensive smart blind stick to the visually disabled. In this paper we use ultrasonic sensors for detecting obstacles, global positioning systems (GPS) and global system for mobile communication (GSM) modules for tracking positions and send a message to the configured number. The thermostat that helps sense the ambient heat temperature and IR sensor to identify the potholes when driving, The individual buzzer is accomplished to get acquainted with the unit. When a person heads towards an obstacle, the buzzer resounds. The main point of view of this program is to guide the visually impaired to their service.

## Smart Blind Stick Using Arduino

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**Abstract**— This paper describes the design of smart blind stick, this is an approach to alert visually impaired people from obstacles around them this device is composed with ultrasonic sensors, IR sensor, Arduino Mega 2560 where ultrasonic sensor detects the distance between stick and obstacle in front of them and IR sensor is used to detect the obstacles which are very close. If any obstacle occurs, the system will alert the person by generating an alarm using buzzer. So, the person can avoid collisions with the obstacles. Our project aims to design and implement an efficient and cheap stick.

## Personal Assistant For Blind People

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**Abstract**— Visual impairment is one of the major problems that people face. They need human assistance to do many activities in daily life. This paper describes the designation of the smart assistance device to help blind people by using multiple sensors. The device mainly provides basic services including object detection, falling detection, water detection, heart-beat rate detection, temperature detection and emergency button to send alert messages which makes day to day activities easier for them. The microcontroller will retrieve data and it passes vibrations to the user through sensors which will notify about detected things. It is an efficient device and it would be great assistance to blind person.

## E - Voting System

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**Abstract**—The problem of traditional-voting-system is time-consuming and security. This paper is with the development of an online voting system that is advance from the traditional voting system. We use an online voting system to promote awareness and make the election more comfortable and more secure by using people Aadhaar card that is stored in the government database. People can log in with their id and linked mobile numbers to participate in voting and choose their favorite candidates to cast vote. This will motivate people to participate in an election without going to the election center.

## Comparison between leading APIs used in Translation Apps

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**Abstract** — Translator Apps for Mobile devices is a mobile application to translate from English to Kannada (Language spoken in Karnataka) and vice versa. In addition translations can be done between other languages as well. And hence, APIs become an important part of the application. There are a lot of different APIs which can be used to perform translations. This paper presents a comparison between the most frequently used API by checking their accuracy, ease of use and other attributes to highlight which API is best used for Translation purposes.

# BLOCKCHAIN TECHNOLOGY

## Electronic Voting System Based on Blockchain Technology

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**Abstract**— Conducting a successful election is a great challenge for any country. Initially people preferred traditional voting system where the voter has to cast his or her vote on a ballot paper that is later counted by some government representatives, but this method is not economical as it requires a lot of manpower as well as resources. Then came electronic voting like remote Internet voting and onsite machine voting which are the best way of casting vote in any election till date but as there can be tampered or their hardware or software can be manipulated so there is no 100% guarantee of fair elections. But now the time has changed, and, in this project, we have designed an Electronic voting machine that works on most reliable and secure technology i.e. Blockchain.

## Smart Contract Authorization Using Blockchain

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**Abstract**— File authorization is a process of either giving or denying access to a system which in order gives the permission for client to access information depending on the client's profile. Most of the security frameworks depend on a advance procedure which consists of two steps. Confirmation: The first stage which guarantees about the user personality, Approval is subsequent step, which grants the user to get to the access dependent on the user's character. Act in the present day frameworks rely upon trusted third party member. We propose using blockchain-based shrewd agreements to encourage secure examination and the board of files without the need of confided in outsider part. Utilizing the Ethereum blockchain, we can store a hash of a private report (an agreement, for instance) alongside an Ethereum Address. This demonstrates in an open and secure manner that the proprietor of the Ethereum Address has marked the archive. Different gatherings to the agreement can sign it too. All they need is a connect to the marking page, which is produced when a client transfers a document.

## Blockchain Based E-Voting System Using Ethereum

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**Abstract**— To build an electronic voting system that must satisfy the requirements of legal principles has been very demanding for a long period of time. Advancements in the IT world has paved new ways for distributed ledger technologies to come into existence to improvise the legality of the existing systems. But limitations still prevail. Through this paper, we realize blockchain technology as a service to distributed ledger technologies. The three pillars of blockchain technology are transparency, immutability and decentralization. Now, a voting application should exhibit transparency, fairness, confidentiality and security against malicious interventions which is all possible with the help of blockchain technology. Since a public ledger is created every time a transaction is done, there is complete transparency among all the users of the blockchain and since it is decentralized, the election process is fair; as there is no central authority accountable for the entire election. Confidentiality is maintained by assigning one account per person with their own private key and our smart contracts will ensure that once a vote is casted, it cannot be tampered due to the nature of the blockchain. The smart contracts will also be responsible for allocating one vote per account to avoid duplicate votes. The elections will be time sensitive and once the election ends the statistics will be displayed to the voters.

## **Blockchain Bidding System**

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**Abstract**— The paper introduces a blockchain bidding system. As internet services are used across the world Convergence technologies have changed people's daily lives ever more for e-sales, e-travel and more. The online E-auction being one of the popular e-practices, offers to sell products to the highest bidder through the internet. As with the sealed bid the broker has to be paid additional processing fees on top of the initial costs because the broker is the only way for the bidder to get through to the seller during the auction. Apparently one cannot judge whether the broker is trustworthy or not. To tackle this problem we propose a low cost transaction blockchain platform to build a sealed or a public bid .The smart contract announced in 1990 and reinforced via Ethereum's blockchain, will guarantee the fact that all the transactions are registered on the same yet decentralized booklets which is safe, private and non-reputable and unalterable. The intelligent contract includes the auctioneer's address, the start of the auction, the Date, the winner's address and the current highest bid.

## **Real Time Eye-Tracking for Password Authentication**

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**Abstract**— Real-time eye tracking is vital for hand free blink-based password entry. PIN's (password authentication numbers) are extensively used for security and authentication. PINs are largely used for safety reasons. Password authentication works when a user enters the password using his hands, which might lead to cracking the password through techniques like shoulder surfing or thermal tracking. Authentications with eye blink techniques, does not leave any traces behind as there is no movement or contact with the keyboard during password entry and thus provides a safe environment. Eye tracking helps in locating the image frames sequentially and tracks the center of the eye. This project introduces an application in which we are combining eye blink tracking PIN entry, face detection/recognition and OTP (One Time Password) to avoid shoulder surfing and thermal tracking attacks.

# HIGH PERFORMANCE COMPUTING

## Prediction and IoT Based Solar Street Lights with Intensity Control

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**Abstract**— Street lights are an essential part of road transportation network, and huge amount of money is incurred by the government in keeping them operational at all times. The operational cost includes generation of electricity and therefore electricity is a resource that should be utilized judiciously. We propose an IOT based solar street light monitoring and controlling system to ensure, low power consumption through the automatic dimming of lights as per external lighting conditions, consumption monitoring and instant faulty light detection. Our proposed system consists of smart street lights that automatically turns on at desired intensity based on amount of lighting needed. The solar output is predicted throughout the day and adjusts the lights at desired intensity enabling the monitoring person to estimate power consumptions as per the current intensity of light this can also be extended to predict monthly power consumptions. Also, each of the unit has load sensing functionality that allows it to detect if the light has a fault. It then automatically flags that light as faulty and this data is sent over to the IOT monitoring system so that necessary action can be taken to fix it. The status of the light can be monitored through an android app.

## Mobile Application Development for Learning Kannada Speaking Basics Using AI/ML Language Translator

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**Abstract**—People who migrate from one state to another face difficulties in having conversation with local people of the state. Traditional methods for teaching basic regional languages pose many challenges in language translation which will be solved by ML (Machine Learning) based approaches. It focuses more on teaching via animated character which will speak, rectify and appreciate the users approach to learn. Thus, users can learn the regional language and can communicate easily with the local people. The demand of translation has become more in recent years due to increase in the exchange of information between various regions sing different regional languages due to increase in business at national and global level. This paper presents an implementation of mobile application to translate spoken English to spoken Kannada for learning Kannada language using Application Programming Interface (API's) for ML and Text to Speech conversion. The work is effectively demonstrated to test the effectiveness of the application.

## 2 D Games AI Character by Genetic Algorithm

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**Abstract** — The challenge is about an individual technology for 2 Dimensional games. This could create enticing Artificial Intelligence character without the direct help of the professional software field person. This method makes use of genetic algorithm set of rules for creating Artificial Intelligence character. As the algorithms keeps on getting better with very generation so the fitness score or the path will be taken into account for the user. By the self-getting fitter the human being will have the best opponent to play against it. There is various keyword used such as genetic algorithm, artificial intelligence character, Tensor flow, python keras.

## **Smart Wheelchair Using Internet of Things**

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**Abstract**— Internet of things (IOT) technologies has transformed the way we interact with the digital devices. IOT can applied across various domains. However, it is more beneficial when applied to monitor the health for old and disabled people. This paper presents an IOT based healthcare monitoring system for wheelchair users. Wheelchair users are mostly physically disabled and elderly people who require medical attention. They require a lot of human help to move even in their own home. This paper focuses to design and build a wireless healthcare monitoring system and a wheelchair controlling system. Healthcare monitoring system generates alerts based on pulse sensor, temperature sensor and a camera module attached to the wheel chair. The wheelchair controlling system controls the movement of wheel using an android remote controller, voice controller and a joystick controller. Our IOT based smart wheel chair extends a helping hand for the disabled/old people and their families.

## **An Efficient Eye Blink Identification Technique for handicapped: Assisting System For Paralyzed And MND Patients**

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**Abstract**— This paper aims to give an incredibly low evaluated gadget that peruses and changes over eye-squints from the patient to an all around acknowledged correspondence code-The Morse code. There are a couple of clinical issues that can provoke an individual getting debilitated or Locked-in-syndrome that restrains discourse or voice creation. Conditions, for instance, LIS, ALS and Cerebral Palsy are among the normal contaminations that impact talk. In all or most such cases, patient loses the capacity to speak with the outside world in a viable way despite the fact that his insight is generally unaffected. Some redid AAC contraptions have been developed that utilizes gesticulations from the patient and changes over them into an information that can be conveyed however such gadgets are extravagant and are for all intents and purposes far off for a great many people influenced.

## **Retail Store - Product Recommendation System**

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**Abstract**—Usually there are masses of information created every day moreover, the nearness of a ton of information makes it scarcely to mining the required information. Personalized rec- commendation is the strategy to mitigate the issue. Collaborative filtering is one of the most notable advances in the customized recommendation system. As the customer rating matrix ending up being incredibly sparsity, traditional collaborative filtering recommendation figuring registers likeness between things using the rating data, and it doesn't consider the semantic association between different things, thusly recommendation quality is par- ticularly poor. To deal with this issue, this paper combines the thing semantic closeness and the thing rating similarity, which considers the effect of thing semantic and customer rating to improve the things based collaborative filtering.

## Forest Fire Detection And Prediction Using IoT And Machine Learning

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**Abstract**— We can't underestimate the significance of forest because forest contributes to the development of a nation by providing goods and services to the people and industry. But when the fire inside forest begins, it spreads everywhere within the forest and destroys everything. Our technique is to detect and predict the forest fire in advance to avoid the maximum losses.

## Wearable Banknote Value Audio Interpreter Smart Glass for the Visually Impaired using Natural Language Processing

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**Abstract**—Knowing and understanding the value of a banknote in the real-world, to resolve the problems faced by the blind population of the nation, this is an approach to provide a simple yet innovative solution for them using the latest technology. This solution provides results to know the denomination of real currency notes present in front of the visually impaired or completely blind in audio format which is the best way of interpretation to the visually impaired. The solution is aimed at building a smartphone application that can visually detect, internally analyze using sophisticated algorithms and interpret the results through auditory perception. Since efficiency is always the main objective of any project the idea of implementing the solution in a product like blacked out spectacles that is used by almost 99% of the visually impaired population is also taken care of by using the latest technologies.

## E-assessment using image processing in ∞ Exams

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**Abstract**—This paper includes a product framework called ∞Exams (InfinityExams) which underpins (fundamentally in advanced education) paper-based assessment and makes it simpler, increasingly agreeable and accelerates the entire procedure while keeping each and every positive quality of it yet additionally decreasing the quantity of negative viewpoints

## Smart Lightweight Wearable Device for Partially Impaired and Blind People

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**Abstract**—Being able to live independently is everyone's goal but there are many people among us who are incapable to live independently just because they are not gifted with the senses a normal person has. This paper

outlines state-of-the-art solution that enables the blind person to perceive the world in a way very much similar to a normal person, by enhancing the effectiveness of the senses they have, with the aid of technology, to sense the surroundings and to make sudden reflexes. Conventional white canes simply detect obstacles at a certain distance with the help of ultrasonic sensors, but do not give information about the type of situational surrounding they are in or how to counter sudden unexpected obstacles. Our state-of-the-art proposed system works on Arduino Nano which in turn consists of various sub-modules including Ultrasonic Sensor, Vibration Motor, Buzzer, Wi-Fi Module, Linode Cloud. A simple, cost-effective, configurable, easy to handle to device. This device will be effective, efficient, and unique in its capability in specifying the source and the distance of the obstacles that may encounter the partially impaired and blind people. By waring this device, blind people can full avoid the use of blind stick (white cane) and such other tools. This device will help the blind people to navigate without holding a blind stick that makes more convenient.

## **Efficient Virtual Machine Load Balancing Using Cloud Computing Environment**

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**Abstract—** Cloud computing is designed to provide a scalable and low cost way to delivering on-demand IT resource services over the internet. Over a period of time cloud computing experienced tremendous development . Nonetheless, the economic model centered on hardware and software demand based on technological requirements (CPU utilization, memory...) or strongly contributed to productive use of computer resources. Load balancing is therefore a crucial aspect of cloud computing. Cloud computing requires optimizing the efficiency of the various services provided by the cloud providers to minimize SLA infringement, i.e.,high degree of security, availability and responsivity. As cloud computing is growing increasingly and customers are demanding better performance and more services, cloud resource scheduling and load balancing has become a very interesting and significant research field .Therefore SLAs are emerging as an important factor between consumers and providers.In the existing algorithms there are drawbacks due to their single objective. But in this work, we are considering multiple objectives and multiple parameters for balancing load across virtual machine and to achieve less power consumption and reduce SLA violation.

## **Gps Tracker For Public Convenience Using Node Mcu And Blynk Application**

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**Abstract—** IoT can be simply understood as anything in this world which is connected to internet. IoT basically needs an IoT platform for its implementation. In the upcoming days people will see almost everything under the sun which will be working with IoT technology. Vehicles and transportation has become a major part in our daily life and keeping a track of them is also essential. Likewise, safety of children is an important area of concern for parents. The children are naïve and vulnerable to child trafficking. For the safety of the children, the paper proposes a GPS system to track children. GPS helps in getting the latitude and longitude values of device on which they lie. A technology combining IoT and GPS for our application is made. The IoT platform does not support mapping of ordinates of an object. So implementation of maps using Blynk Application is carried out on that platform.

## **Smart Mirror using Raspberry pi 3**

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**Abstract—** In today's society the information is easily available in the phone and in our laptops. The project design of "smart mirror" makes the human life much easier and faster. In this project the real-world data would be collected and transmitted from the machine and it is managed by the raspberry pi board. A two-way mirror is used behind which a monitor is attached behind the mirror and this makes it a "smart mirror". Here the mirror displays all the necessary widgets such as date, time, weather forecast details, daily updated news, and it also contains some features such as google assistant and image processing. This proposed smart mirror helps to get all the details just by looking at the mirror. All the live updates would be updated by the internet and Wi-fi.

## **Arduino based in-door autonomous robot using Bluetooth sensors**

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**Abstract—** In door autonomous robots has wide scope in the current world of Industry 4.0. With the advent of low-cost micro controller platforms like Arduino, it is easier to design and deploy inexpensive robotic solutions in Retail environments like physical stores and supply chain nodes like Distribution/Fulfillment centers. The paper discusses a low-cost Arduino based 4 wheeled robot which can navigate in the given environment with Bluetooth sensors as position nods and obstacle avoidance built-in. Given the diversity and interconnectivity of Bluetooth sensors, we can implement robots moving with centimeter accuracy which is the need in partially closed environments. The robot should navigate its way to the destination which is fed by a remote server with resides on the premise to achieve low latency.

## **IoT Based RehabilitationSystem for Patients and Elderly People- A Survey**

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**Abstract-** During recent days the technological advancements of the Internet of Things (IoT) and rapid growing costs of various health care devices, the main vision of these connected e-health applications has been developed that constitute Personal Health Devices. To monitor the health of elderly people and developing a rehabilitation system is a challenging task. The incorporation of the communication technology in the healthcare industry have been explored the different possibilities to optimize the all the available medical resources and provide an efficient reliable healthcare services to the elderly people and patients with disabilities, chronic illness and other healthcare issues. This paper presents a comprehensive analysis of existing techniques which are developed in various healthcare applications using the IoT for the development of Rehabilitation system based on various parameters of disease by collecting patients as well as to inform doctors by sending early notifications. The system should be developed in such way that that collects all parameters of the patient and diagnose the disease as soon as possible. The network parameter are also considered suitably for the proposed solution for different environment are also presented, which improves efficiency of rehabilitation system developed for monitoring the health of elderly people.

## Anti-Theft Application For Android Smartphone

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**Abstract-** Smart phones are multipurpose electronic device mainly used for communication. When the phone is missing to the owner or some theft occurs, it is usually a cumbersome process for the owner to go to police station or start searching for it. To search for the lost smartphone efficiently and reduce mental stress of being overconcerned towards it, a project has been initiated. This project aims at developing an android application that helps to track your phone through other smart phones belonging to a person who might be your acquaintance, neighbour or your family member. Each device has an option to either be a user or administrator or both. The administrator monitors its users who have registered through it's id. At each interval of time users send signals to its administrator that they have not been stolen. But, once it is stolen as it is the nature of thief to change the sim card user transmits signal to admin and notifies with subsequent location and the new sim card IMEI number. To develop this application Android technology is used. Android studio and Java programming are used to code for the application. Whereas to contribute for the database to store location Firebase Realtime Database technology is used.

## Vehicle Protection With Fingerprint Verification And Gps

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**Abstract—**The number of stolen vehicle in recent time is increasing day-by-day and vehicle security is a serious concern. Conventional locks can be effortlessly broken. The best decision is using bio-metric to recognize a person, This unique fingerprint can be utilized to find a match between two diverse persons. This framework is created using an Arduino with fingerprint sensor and GPS.Fingerprint is Unique and permanence,so fingerprint verification can be used in your vehicle against the customary lock framework.

## An Approach towards FarmBeats: IoT Based Data-Driven Agriculture System

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**Abstract—** Data-driven techniques help boost agricultural productivity by increasing yields, reducing losses and cutting down input costs. However, these techniques have seen sparse adoption owing to high costs of manual data collection and limited connectivity solutions. In this paper, I present Farm Beats, an end-to-end IoT platform for agriculture that enables seamless data collection from various sensors. The main motive of the paper is to improvise the process of organization of agriculture fraternity in India, eventually leading to eradicate the suicides of farmers and stabilize the prices of agriculture produce in India. This paper deals with data driven techniques to achieve the objective.

## **Small Round Blue Cell Tumor Classification using Pipeline Genetic Algorithm**

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**Abstract**— Computational classification of cancerous tumors is an important research problem in machine learning. A number of approaches have been proposed by researchers to achieve accurate differentiation of samples as cancerous or non- cancerous or to differentiate different stages of a cancer. This process of computational classification has also been successfully carried out by using gene expression data as input. In this paper, we have proposed an evolutionary technique based on genetic algorithms for classification of small round blue cell tumors. This tumor occurs in four subtypes, our method has been able to differentiate these four types with 100% accuracy. The method has been compared with existing methods and has been shown to perform very well with respect to classification accuracy, recall, precision and support.

## **Automated Detection of Eye Blink and Conversion to voice using ML Algorithms**

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**Abstract** — The motive of the paper is to develop a real time method for the paralysed patients, which is the conversion of eye blinks to voice. The motive behind this research paper is to provide assistance for the disabled who always requires assistance for the interaction with hands. Hence we provide them help by fulfilling their requirement. We use certain algorithms for this need. For the facial and eye detection we use the Haar Cascade Classifier. It uses Haar like features for finding the axial positioning of the eyes. An efficient method for tracking the eye was developed which is used to detect the eye position. We also use the Eye Aspect Ratio (EAR) to find the state of the eye and estimate the opening and closing of the eyes. Basically, we use a live stream video in this project as the input and capture the Eye Blinks. This is further processed by the OpenCV Library and henceforth provides the required assistance.

## **Neural Network Based Method For Sign Language Recognition**

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**Abstract**— Sign language is a language that especially abled people use to communicate with normal people. Speech impairment is a disability which affects one's ability to speak and hear. Hand signs is one of the methods used for non-verbal communications which we call Sign Language. The goal of this project is to provide a simple way to very trivial communication problems the world faces in this present scenario. We aim to build a minimalistic translation engine that recognizes and converts sign language to text(English) and could be implemented on any platform. This engine could be made with the help of Image Processing and Deep Learning.

## Age, Gender and Emotion Detection using CNN

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**Abstract**— Face is one of the most dominant features in our body. We can get many information like age, gender, etc by analyzing the face of a human. In today's world, computer vision is been used to train machines to comprehend and understand the real world. Using several digital images from webcam, videos, cameras and with the help of deep learning, computers can correctly figure out and classify objects and then respond to what they "see" in real world. There are various uses of identifying age and gender from face like forensic testing, restricting access of alcohol from wending machine and adult content for young people. Emotion from a face can be used to predict human computer interaction, students/teacher's interest in class, advertisement bots etc.

## A Machine Learning Approach to Genome Editing Techniques

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**Abstract**- In the current era, the clustered regularly interspaced short palindromic repeats (CRISPR)/CRISPR-associated system (Cas) is developed and used as the most adaptable instrument for genetic administration application. It is encompass of repetitive bases followed by short fragments of DNA. The manipulation of targeted genes and genomic regions that are balancing to a programmable single guide RNA (sgRNA),but the effectiveness of the sgRNA is not properly defined for the target site so unintended off-targets might be cleaved. Modernistic methods for sgRNA designs are based on predicting the off-targets for a sgRNA using basic sequence features. We present a summary and relative analysis of algorithms based on machine learning approaches which will be more impressive and predictable method for predicting susceptibility of a genomic site to be cleaved by a given sgRNA. We will show that the predictions are more accurate and then validate the occurrence of bulges.

## Face Spoof Detection Using Dual Stream Convolutional Neural Network

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**Abstract**—Face recognition is an acknowledgement strategy used to distinguish countenances of people whose pictures spared in information index. Face acknowledgement has consistently stayed a huge focal point of research due to its non-intruding nature. Face discovery is utilized in biometrics, regularly as a piece of a facial acknowledgement framework. This imaginative innovation has defects. This is the place the requirement for against parodying arrangements becomes possibly the most important factor. Most of the faces caricaturing assaults utilize 2D and 3D to trick facial acknowledgement programming. In spite of the fact that numerous compelling strategies have been proposed for against parodying we find that the presentation of many existing techniques is corrupted by illumination. It spurs us to create light invariant strategies for hostile to satirizing. In our paper we propose a double stream convolutional neural system. It fundamentally chips away at two spaces: to be specific RGB and MSR. The two spaces are similarly significant on the grounds that the previous contains high recurrence facial highlights yet delicate to brightening. Both these highlights are taken care of the system and we use attention based combination strategy to intertwine both the features. The outcome, whether the picture is genuine or parody is built up utilizing softmax.

## **Detection of Breast Cancer using Pattern Recognition**

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**Abstract—** Computer-aided decision or detection systems which support plan to progress for screening programs of bosom breast cancer by helping radiologists to assess DM (Digital mammography). Regularly such techniques continue in two stages: choice of applicant areas for harm, further characterization as both malignant or benign or normal. The study, utilised as a candidate detection method which is built on deep learning to impulsively identify and also to identify segment soft tissue lesions in Digital Mammogram. A recent study on PNN (probabilistic neural network) training algorithm is predictable. The standard PNN, however requiring an exceptionally short preparing time, when executed displays the downsides of being costly in terms of classification time and of challenging an unimpeded amount of units. The commended alteration disables the concluding disadvantage by introducing a removal measure to evade the storing of excessive patterns. The contortion in the bulk estimation presented by this standard is made up for by a cross-validation technique to adjust the system parameters. The proposed algorithm makes it conceivable to understand the PNN and simultaneously, makes up for certain deficiencies emerging from the hypothetical premise of the PNN, which doesn't perform well with small training sets and classifies the image into malign, benign or not.

## **Pollution Emission Detector**

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**Abstract-** Our work delivers an Arduino based pollution emission detector. The framework is used for distinguishing the measure of gasses discharged from the automobiles. The current emission testing mechanism used transport Authority is costly and Space Consuming, in our Framework The measured gasses are calculated using sensors (mq-7, mq-135). Arduino IDE is used to code the limits of the threshold limits in Arduino, Later Different output units are used to digitally give emission values for the User.

## **American Sign Language Translation using Firebase**

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**Abstract—** Sign language is the manual way of communication by the speech impaired people. They use hand gestures and expressions to express their thoughts. Thus it is hard for them to communicate with others. Our project provides a solution by converting the sign language to speech, helping speech impaired people to communicate with others. The Application uses the camera of the device to capture the sign and sends to a model hosted on FIREBASE and the matched sign is converted to speech by GOOGLE'S translator.





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