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)

29th and 30th April 2020

Organised by
School of Computing and Information Technology

Co-Sponsored by

ATS Learning Solutions

PROCEEDINGS OF

SECOND INTERNATIONAL CONFERENCE ON

ADVANCES IN COMPUTING AND INFORMATION TECHNOLOGY

(IACIT-2020)

29th & 30th April 2020

Organized by

School of Computing and Information Technology

Virtual Conference

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SECOND INTERNATIONAL CONFERENCE ON ADVANCES IN COMPUTING & INFORMATION TECHNOLOGY

(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.

<u>Speaker's Profile:</u> 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), 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.

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School of Computing & Information Technology

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Day – 1: Paper Presentation Schedule

Wednesday, 29th April 2020		
Data Mining & Artificial Learning – 1		
	Paper ID	**Title & Authors**
Session 1-A 10:30 am To 11:30 am	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**
Session 1-B 10:30 am To 11:30 am	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
Mobile Computing & Cloud Computing – 1		
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 forSpraying 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
Digital Image Processing – 1		
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
Digital Image Processing - 2		
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

10:30 am To 11:30 am	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, Anantaraj 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

	Paper ID	Title & Authors
Session 2-A 12:00 Noon To 1:00 pm	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, Soharabanu 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 Rananavare

IoT & Wireless Sensor Networks - 1

	Paper ID	Title & Authors
Session 2-B 12:00 Noon To 1:00 pm	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 Padmageetha 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 & Artifical Intelligence - 2

	Paper ID	Title & Authors
Session 2-C 12:00 Noon To 1:00 pm	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, Sasidhar 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

	Paper ID	Title & Authors
Session 2-D 12:00 Noon To 1:00 pm	IACIT – 697	Comparison & Adoption Of FOSS Serverless Computing For Enterprise Openstack C Loud Platform Rajesh Rompicharla, 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

	Paper ID	Title & Authors
Session 2-E 12:00 Noon To 1:00 pm	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	Immortalar 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

	Paper ID	Title & Authors
Session 3-A 2:00 pm To 3:30 pm	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

	Paper ID	Title & Authors
Session 3-B 2:00 pm To 3:30 pm	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 Rananavare
	IACIT – 597	Hospital Management System using Web Technology KotapatiSaimanoj, GrandhiPoojitha, KhushbuDevendra Dixit, LaxmiJayannavar
	IACIT – 616	Tridaily Attendence 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

	Paper ID	Title & Authors
Session 3-C 2:00 pm To 3:30 pm	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		
Session 3-D 2:00 pm To 3:30 pm	**Paper ID**	**Title & Authors**
	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		
Session 3-E 2:00 pm To 3:30 pm	**Paper ID**	**Title & Authors**
	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, Sripriya 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	**Paper ID**	**Title & Authors**
	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	**Paper ID**	**Title & Authors**
	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, Chermanna Mt, Boya Harinath, Deepak J, Sheelavathy K V
Network Security		
Session 4-D	**Paper ID**	**Title & Authors**
	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
IOT & Wireless Sensor Networks - 3		
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 Krisha 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

REVA UNIVERSITY
Bengaluru, India

School of Computing & Information Technology

Second International Conference on Advances in Computing & Information Technology

(IACIT – 2020)

Day – 2: Paper Presentation Schedule

Thursday, 30th April 2020		
Machine Learning - 6		
Session 1-A 10:30 am To 11:30 am	**Paper ID**	**Title & Authors**
	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
	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		
Session 1-B 10:30 am To 11:30 am	**Paper ID**	**Title & Authors**
	IACIT – 596	Home Autonetics Using Internet Of Things B Lakshmikar, D Raghavendra, G Chaitanya Sai, G Siva Teja, Vani Krishnaswamy
	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

Mobile Computing & Cloud Computing - 3

	Paper ID	Title & Authors
Session 1-C 10:30 am To 11:30 am	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 Taqhi, 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

Digital Image Processing - 3

	Paper ID	Title & Authors
Session 1-D 10:30 am To 11:30 am	IACIT – 547	Real-Time Face Recognition System Using Lbph 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

Machine Learning - 7

	Paper ID	Title & Authors
Session 1-E 10:30 am To 11:30 am	IACIT – 665	Prediction Of Heart Diseases In Diabetic Patients Joshua S, K A Ashik, K R Purshottama, 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 Krisha 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

	Paper ID	Title & Authors
Session 2-A 12:00 Noon To 1:00 pm	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 Ml 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

	Paper ID	Title & Authors
Session 2-B 12:00 Noon To 1:00 pm	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.Mahasmrt, 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, Shivaranjan 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

	Paper ID	Title & Authors
Session 2-C 12:00 Noon To 1:00 pm	IACIT – 732	Yolo Based Realtime Forest Fire Detection Shireesh Kumar P A, Shreya Merin, Keerthi Reddy ,Thejas Hr, Surekha Thota
	IACIT – 774	Fake News Detection And Flagging Bibek Prasad, Vishnu R Pillai, Chandana L, Boomika H P, Sowmya Sundari L K
	IACIT – 798	Predictive Human Heart Anomaly Detector Sohini Bhar, Mallikarjuna Shastry.P.M
	IACIT – 808	Facial Expression Recognition And Gender Detection Using Cnn Revanth U Karanth, Abijithsandur, S K Jayanth, Rahul S, Asha K
	IACIT – 813	Making The Vehicle (Car) Navigate In Traffic By Avoiding Collisions Using Deep Learning Chaitanya Krishna VB, Bhaskar Reddy PV, Chethankumar A, Salman Ahmed
	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

IOT & Wireless Sensor Networks - 6

	Paper ID	Title & Authors
Session 2-D 12:00 Noon To 1:00 pm	IACIT – 750	Assisting Farmers In Optimizing Their Crop Yield Anirudha B S, M Vijay Bhargav Reddy, Surekha Thota
	IACIT – 762	Self Driving Car Using Image Processing And Neural Netrorks Anirudh.J, Ayush.V, Anup Ranjan Sabat, Aushij Singh, Chaitra B
	IACIT – 788	GPS And IOT Based Soldier Tracking And Health Indication System Rakesh G S, Rohul S, Rohul Shaik Ibrahim, Shirisha M D, Prof . Soumyalatha N
	IACIT – 791	Finger Gesture Mouse Using Opencv Abhishek Panda, Aisha Aslam, Amal Mirwaiz, Anusha, Yerriswamy T
	IACIT – 767	Automated Solar Irrigation System Chandana T C, Deepika N, Ayesha Begum M, Darshini N, Chaithra M H
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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/algoritms 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/algoritms 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 intruducing procedure/algoritm, naming HighUI-Excavator (High Utility Itemset - Excavator) as part of this paper for extracting high utility sets. HighUI-Excavatorbring 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 itemsset 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, there by 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 a nd 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 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 Autonetics 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 footstep 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

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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— Availableness of blood throughout the duration of emergencies is highly important for each single physical thing. There are various E-blood donation banks for effective communique 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 utilizations 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 homocysteinea, that is higher level of an amino acid name homocysteine, causing blood clots in the arteries which results is 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 humungous 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 is 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 trails 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 Ml 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 Biclustering 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 human 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. Pubic 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 trigger 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 nd cryptography are used where steganography is focusing on the existence of a message secret and cryptography is focusing on content message secret combing 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 inparticular area can controlthe robot via user voice input. To control the robot through user voice inputit requires android app to communicate via Bluetooth HC-05 module. Subsequently, the robotic vehiclehas skill-ability to senses 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 use 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 topre-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 a 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 buzzer 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 should 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 of 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 a d 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 systems 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 solider. 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 Ml 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

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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 ac coring 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 Warring 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 tempered 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 ∞ E*xams*

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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

Kavana.K, K . Rajitha, Kavya SM, Ravali.M, Supreeth S
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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 . Nonethless, 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 gest 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

Nimrita Koul, Sunilkumar S. Manvi
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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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3rd International Virtual Conference on Advances in Computing & Information Technology (IACIT - 2021)

17th and 18th May, 2021

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MESSAGES

MESSAGE FROM CHANCELLOR

The successful outcome of many national and international conferences 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 Computer Science & Engineering and School of Computing & Information Technology are hosting a two-day International Conference with a focus on "Advances in Computing and Information Technology [IACIT-2021]". 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 teams of School of Computer Science & Engineering and School of Computing & Information Technology for their endeavor!

Dr. P. Shyama Raju
Chancellor,

REVA University,
Bengaluru, INDIA.

MESSAGE FROM VICE-CHANCELLOR

I am delighted to note that the School of Computer Science & Engineering and School of Computing & Information Technology are organizing a two day International Conference entitled "Advances in Computing and Information Technology [IACIT-2021]". Certainly, this type of conference not only brings all the researchers, students at oneplatform, 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 Computer Science & Engineering and School of Computing & Information Technology for initiating the conduction of such a conference.

I wish the conference a grand success.

Dr. M. Dhanamjaya
Vice-Chancellor,

REVA University,
Bengaluru, INDIA.

MESSAGE FROM REGISTRAR (I/C)

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 Computer Science & Engineering and School of Computing & Information Technology, REVA University are organizing a two day International Conference entitled "Advances in Computing and Information Technology [IACIT-2021]".

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. N. Ramesh
Registrar (I/C),

REVA University,
Bengaluru, INDIA.

MESSAGE FROM THE DEAN (R&IC)

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 Computer Science & Engineering and School of Computing & Information Technology.

I congratulate the School of Computer Science & Engineering and School of Computing & Information Technology for organizing the international conference "Advances in Computing and Information Technology [IACIT-2021]" for the third 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
Dean, Research & Innovation Council,

REVA University,
Bengaluru, INDIA.

MESSAGE FROM THE DIRECTOR (CSE & CIT)

Curricula of both undergraduate and postgraduate programs at REVA University 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. Research degree programs are aimed at design and development of solutions to contemporary problems in computer and engineering technologies oriented towards humanity development. Henceforth, organizing the platform for the collaboration of researchers on a common platform is worthwhile.

Thus, it gives me immense pleasure to welcome you to the Third International Conference "Advances in Computing and Information Technology [IACIT-2021]". This Technical International Conference will provide a prestigious international platform by bringing together local and overseas technical researchers and students to exchange their experienced knowledge and expertise issues relating to the dominating technology trends.

Dr. Sunilkumar S. Manvi
Director, SoCSE & SoCIT,

REVA University,
Bengaluru, INDIA.

KEYNOTE TITLES WITH PROFILES

Keynote 1

Topic: Journey of Text Detection in Video and Natural Scene Images

Speaker: Dr. Palaiahnakote Shivakumara

Date: 17/05/2021

Time: 10:00 a.m. to 11:00 a.m.

Venue: IACIT Virtual Conference

Abstract: The main challenge of any researcher in any field is that how to sustain and continue the research in the same field or topic in this competitive world? In this talk, I would like to highlight some of the tips or key points by considering text detection in video and natural scene images as a case study address the above mentioned challenge. This talk focus on how to find a new problem, how to explore new applications, how to generate ideas to solve the challenges and what are the criteria to be considered for doing quality research.

Speaker's Profile: Dr. Palaiahnakote Shivakumara is an Associate Professor in Faculty of Computer Science and Information Technology, University of Malaya, Kuala Lumpur, Malaysia. Previously, he was with the Department of Computer Science, School of Computing, National University of Singapore from 2008-2013 as a Research Fellow on Video text extraction and recognition project. He also worked as Research Consultant for the project on Scene Categorization at Nanyang Technological University (NTU), Singapore in 2007. He received B.Sc., M.Sc., M.Sc Technology by research and Ph.D. degrees in computer science respectively in 1995, 1999, 2001 and 2005 from University of Mysore, Karnataka, India. He has been serving as Associate Editor for IEEE Transactions on Multimedia ((TMM), ACM Transactions Asian and Low-Resource Language Information Processing (TALLIP), Pattern Recognition (PR), International Journal on Document Analysis and Recognition (IJDAR), Springer Nature-Computer Science (SNCS), Malaysian Journal of Computer Science (MJCS) and CAAI-Transactions on Intelligence in Technology. He served as a Guest Editor for the Nature Springer of Computer Science Journal. He has been serving Area Chair, Track Chair for the International Conference on Multimedia (ACMMM), Asian Conference on Computer Vision (ACCV) and International Conference on Document Analysis Recognition (ICDAR). He received a prestigious award, "Dynamic Indian of the Millennium" from KG foundation, India for his research contribution to computer science field. He has published more than 250 papers in reputed international journals and conferences His research interests are in the area of image processing, document image analysis, handwriting analysis and Video text analysis.

Keynote 2

Topic: **Machine Vision and Industrial IoT for Enhancing Production in Industry 4.0**

Speaker: Dr. Raj Kamal

Date: 17/05/2021

Time: 2:00 p.m. to 3:00 p.m.

Venue: IACIT Virtual Conference

Abstract: Industry 4.0 deploys advance manufacturing technologies in assembly lines. The technologies deployed are Machine Vision (MV) and industrial IOT (IIOT). Machine vision is AI based Computer Vision of machines and machine parts. Raj Kamal, Aabha Jain and Manojkumar Deshpande proposed a new design approach recently. The approach consists of four stages IIOT architecture. First stage is MV module. Second stage is Edge-AI computing unit for each module at the assembly-line. The unit runs software for MV module. The software includes connection, data acquisition configuration and AI inferencing from CNN model, which generates feature metrics, map and features for intelligent inferences and actions. Third stage is Edge-Server which serves multiple networked edge units for ensuring synchronization. Fourth stage is Cloud services for computing OI for optimizing the UPH and proactively maintaining the assembly functions and operations. The OI uses AI and analyzed data of the MV modules, assembling functions and operational units. The service does descriptive, prescriptive and predictive analytics from the databases which predict line and machine object faults. The actions and operations does proactive maintenance and optimizes the number of assembled units per hour (UPH) using extracted Operation Intelligence (OI). Recent practical implementations of the machine vision are described.

Speaker's Profile: Raj Kamal (b. 1949) did his M.Sc. at the age of 17, published his first research paper in a UK journal at the age of 18, and his first program, written in FORTRAN that ran at ICT 1904, also at the age of 18 and completed his Ph.D. from the Indian Institute of Technology Delhi, at 22. He has unique distinction of being Professor in five disciplines: Computer Science, Computer Engineering, Information Technology, Electronics and Communication Engineering and Physics, guiding Ph.D.s in these disciplines. He has successfully guided 19 Ph.Ds in research centers in Computer Science, Electronics and Communication Engineering, Energy and Physics.

He is internationally recognized for thirteen text books (refer www.rajkamal.org) for students of Computer, Electronics, Communication and Information Technology, which includes books on Big Data Analytics, Internet of Things, Embedded Systems and Internet and Web technologies published from McGraw-Hill India, McGraw-Hill China, McGraw-Hill South Korea, McGraw-Hill Singapore, McGraw-Hill U.S.A. Computer Architecture Schaum Series, Mobile Computing Oxford Univ. Press and Microcontroller- Pearson Education. He has 161 research publications to his credit in journals and conferences of both international and national repute that includes latest one in "IEEE Transactions in Industrial Electronics" in Vehicular Technology. He has 53 years of experience since Aug. 1, 1967 at age of 18 in research and 48 years of experience teaching. He has also been to Uppsala University, Uppsala, Sweden a world class university for post doctoral studies. He at present is Senior Professor, CSE/ECE, Mentor AIC-Prestige Inspire Foundation, and Advisor, Prestige University Estt. Project, Prestige Institute of Engineering Management and Reasearch, Indore He is former Vice Chancellor Devi Ahilya Vishwavidyalaya,(total period one and half years) and has served Devi Ahilya Devi Ahilya Vishwavidyalaya, Indore for 25 years as Senior Professor in Schools of Computer Sciences, Electronics and Information technology. He has been also been faculty for several years with Punjabi University, Patiala, Punjab,(17 years) Medicaps University 3 years+), Kalasalingam University, Srivilliputtur, Tamilnadu (2 years) and Guru Nanak Engineering college, Ibrahimpattam, Hyderabad, Andhra Pradesh (1 year).

Keynote 3

Topic: **The Role of Multiple GPUs on Residual Network Training**

Speaker: Dr. Heru Suhartanto

Date: 18/05/2021

Time: 9:30 a.m. to 10:30 a.m.

Venue: IACIT Virtual Conference

Abstract: Residual Network (ResNet) is one of the prominent deep learning architectures. The performance of this architecture is outperformed to the previous such as VGG, AlexNet, and LeNet. This architecture has the characteristics of additional input on the layer when the training process. So, the addition of GPU memory during training is needed. In this work, we proposed the parallelization of the ResNet model by using three GTX-1080 of Graphics Processing Units (GPUs) in order to improve the model for colon cancer histopathology image classification. All of the GPU machines in similar specification from the number of cores (@2560), clock processor (@1607MHz), RAM size (@8GB), and data distribution. These GPUs are installed in a CPU server with three PCI-Express 3.0 buses for each GPU. This condition will guarantee that training is running fairly. The performance of all three GPUs can be seen from the utilization of the GPU processor and memory and speed up during the training. The advantage of using parallelization with multiple GPUs is to overcome the out-of-memory in larger batch-size usage that cannot be handled by the use of a single GPU. We used various batch sizes ranging from 8, 16, 24 and 32 as research scenarios. The results showed that the utilization of processor and memory is more efficient for larger batch-size. As a result, we analyze the utilization of each GPU in terms of GPU processor and GPU RAM. The average utilization of processors for each GPU 1, 2, and 3 is 66%, 61.5%, and 81.5%, respectively. Meanwhile, memory GPU utilization is 44%, 40%, and 48.2%.

Speaker's Profile:

Education: 1986 - Undergraduate Program - S1 Major in Mathematics, UI; Supervisor: Sumantri Slamet Iman Santoso, Ph.D ; 1990 - Master of Science, Computer Science, University of Toronto (UofT) , Canada; Supervisor: Prof. Wayne H. Enright; 1998 - PhD, Department of Mathematics, the University of Queensland (UQ), Australia, worked on parallel numerical methods for solving system of ordinary differential equations; Supervisor : Prof. Kevin Burrage

Research Interests: Cloud-Grid-High Performance Computing; Selected working experiences: Since 1986 as a full time academic staff of Pusat Ilmu Komputer (Pusilkom UI) that contributed to the born of Fakultas Ilmu Komputer (Fasilkom UI, Faculty of Computer Science UI) in 1993. Some time in 1989, appointed as as a teaching assistant at UofT and during 1998 - 2000 - appointed as a Postdoctoral Fellow at UQ.

Referee member of Journal of Computational and Applied Mathematics (since 2007), International Journal of Computer Mathematics (since 2007), Journal of Universal Computer Science. Vice Dean for General Affair of Fasilkom UI, for two periodes 2000-2004 and 2004--2008. Appointed as permanent Professor (Guru Besar) at the Fasilkom UI, since 2008;

Awards: Honorary Professor, School of ITEE, The University of Queensland, 2014 – 2017; Adjunct Professor, School of ITEE, The University of Queensland, 2017-2019 ; Universitas Indonesia Best Researcher 2007; The University of Queensland Alumni Award 2010.

Keynote 4

Topic: **Architecture for Next Generation Wireless Networks**

Speaker: Dr. Pascal Lorenz

Date: 18/05/2021

Time: 2:00 p.m. to 3:00 p.m.

Venue: IACIT Virtual Conference

Abstract: Internet Quality of Service (QoS) mechanisms are expected to enable wide spread use of real time services. New standards and new communication architectures allowing guaranteed QoS services are now developed. We will cover the issues of QoS provisioning in heterogeneous networks, Internet access over 5G networks and discusses most emerging technologies in the area of networks and telecommunications such as IoT, SDN, Edge Computing and MEC networking. We will also present routing, security, baseline architectures of the inter-networking protocols and end-to-end traffic management issues.

Speaker's Profile:

Pascal Lorenz (lorenz@ieee.org) received his M.Sc. (1990) and Ph.D. (1994) from the University of Nancy, France. Between 1990 and 1995 he was a research engineer at WorldFIP Europe and at Alcatel-Alsthom. He is a professor at the University of Haute-Alsace, France, since 1995. His research interests include QoS, wireless networks and high-speed networks. He is the author/co-author of 3 books, 3 patents and 200 international publications in refereed journals and conferences.

He was Technical Editor of the IEEE Communications Magazine Editorial Board (2000-2006), IEEE Networks Magazine since 2015, IEEE Transactions on Vehicular Technology since 2017, Chair of IEEE ComSoc France (2014-2020), Financial chair of IEEE France (2017-2022), Chair of Vertical Issues in Communication Systems Technical Committee Cluster (2008-2009), Chair of the Communications Systems Integration and Modeling Technical Committee (2003-2009), Chair of the Communications Software Technical Committee (2008-2010) and Chair of the Technical

Committee on Information Infrastructure and Networking (2016-2017). He has served as Co-Program Chair of IEEE WCNC'2012 and ICC'2004, Executive Vice-Chair of ICC'2017, TPC Vice Chair of Globecom'2018, Panel sessions co-chair for Globecom'16, tutorial chair of VTC'2013 Spring and WCNC'2010, track chair of PIMRC'2012 and WCNC'2014, symposium Co-Chair at Globecom 2007-2011, Globecom'2019, ICC 2008-2010, ICC'2014 and '2016. He has served as Co-Guest Editor for special issues of IEEE Communications Magazine, Networks Magazine, Wireless Communications Magazine, Telecommunications Systems and LNCS. He is associate Editor for International Journal of Communication Systems (IJCS-Wiley), Journal on Security and Communication Networks (SCN-Wiley) and International Journal of Business Data Communications and Networking, Journal of Network and Computer Applications (JNCA-Elsevier).

He is senior member of the IEEE, IARIA fellow and member of many international program committees. He has organized many conferences, chaired several technical sessions and gave tutorials at major international conferences. He was IEEE ComSoc Distinguished Lecturer Tour during 2013-2014.

PROGRAMME SCHEDULE

School of Computer Science and Engineering
and
School of Computing and Information Technology

3rd International Virtual Conference on Advances in Computing & Information Technology (IACIT 2021)
17th and 18th May, 2021

Technical Program Schedule

Day 1: Monday, 17th May 2021

Inauguration: 9.30 am to 9.50am

Keynote Address I: 09.50 am -10.50 am
On
Journey of Text Detection in Video and Natural Scene Images
By
Dr. P. Shivakumara,
Associate Professor, Departmentof Computer System & Technology,University of Malaya (UM), Kuala Lumpur, Malaysia.

Session 1: 11:00 am to 12:30 pm

17S1T1	17S1T2	17S1T3	17S1T4	17S1T5
Data Mining & Artificial Intelligence-1	Data Mining & Artificial Intelligence-II	Mobile Computing and Cloud Computing	Digital Image Processing & Sentiment Analysis-I	Digital Image Processing & Medical Diagnosis-II

Session 2: 12:00 pm to 1:30 pm

	17S2T2		17S2T4	17S2T5 Augmented & Virtual Reality
17S2T1	IoT & Wireless Sensor Networks	17S2T3	High Performance Computing and Networks	
Natural Language Processing		Big data Analytics		

Lunch Break(1:30pm to 2:00pm)

Keynote Address II: 2:00 pm to 3:00 pm
On
Machine Vision and Industrial IoT for Enhancing Production in Industry 4.0
By
Dr. Raj Kamal,
Senior Professor, Prestige Institute of Engineering Management and Research, Indore Former Vice Chancellor and Professor in Computer Science and Electronics, Devi Ahilya University, Indore

Session 3: 3:00 pm to 4:30 pm

17S3T1	17S3T2	17S3T3	17S3T4	17S3T5
IoT & HealthCare PID-(522,752,583,664,667)	Educational Systems Design & Web-based Learning	Data Mining & Artificial Intelligence-III	Data Mining & Artificial Intelligence-IV	Blockchain Technology PID-(553,793,795,815)

Session 4: 4:00 pm to 5:30 pm

17S4T1	17S4T2	17S4T3	17S4T4	17S4T5
Mobile Applications	Advanced and Emerging Applications	IoT & Smart City	Emerging Trends	Data Mining & Artificial Intelligence-V

Day 2: Tuesday, 18th May 2021				
Keynote Address III: 9:30 pm to 10:30 pm **On** **The Role of Multiple GPUs on Residual Network Training** **By** **Dr. Heru Suhartano,** Professor, Faculty of Computer Science, University of Indonesia, Depok.				
Session 1: 10:30 am to 12:00 pm				
18S5T1 **Data Mining & Artificial Intelligence-VI**	**18S5T2** **Data Mining & Artificial Intelligence-VII**	**18S5T3** **Machine Learning**	**18S5T4** **Digital Image Processing & Sentiment Analysis-III**	**18S5T5** **Data Mining & Artificial Intelligence-VIII**
Session 2: 12:00 pm to 1:30 pm				
18S6T1 **Data Mining & Artificial Intelligence-IX**	**18S6T2** **IoT & Wireless SensorNetworks**	**18S6T3** **Data Mining & Artificial Intelligence-X**	**18S6T4** **High Performance Computing and Networks**	**18S6T5** **Data Mining & Artificial Intelligence-XI**
Lunch Break (1:30pm to 2:00pm)				
Keynote Address – IV (2.00 pm-3:00 pm) **On** **Advanced Architecture for Next Generation Wireless Networks** **By** **Dr. Pascal Lorenz,** University of Haute Alsace, France				
Session 3: 3:00 pm to 4:30 pm				
18S7T1 **IoT & HealthCare**	**18S7T2** **Educational Systems Design & Web-based Learning**	**18S7T3** **Emerging Trends**	**18S7T4** **Data Mining & Artificial Intelligence-XII**	**18S7T5** **Machine Learning & Deep Learning**
Session 4: 4:00 pm to 5:30 pm				
18S8T1 **Data Mining & Artificial Intelligence -XIII**	**18S8T2** **Emerging Trends**	**18S8T3** **Advanced and Emerging Applications**	**18S8T4** **Data Mining & Artificial Intelligence-XIV**	
VALEDICTORY-5:45PM **(BEST PAPER ANNOUNCEMENT CONFERENCE CONCLUDING REMARKS)**				

TECHNICAL SESSION SCHEDULE

REVA UNIVERSITY
Bengaluru, India

Schools of CSE and CIT

Third International Conference on Advances in Computing & Information Technology

(IACIT – 2021)

Day – 1: Paper Presentation Schedule

Tuesday, 17th May 2021		
Data Mining & Artificial Intelligence-I		
	Paper ID	**Title & Authors**
Session 1-A 10:30 am To 12:00 noon	IACIT-2021-PID-501	Efficient Channel State Information (CSI) Estimation Using Deep Learning Techniques for Future Generation High Speed Networks Ayesha
	IACIT-2021-PID-503	COTTON LEAF DISEASE DETECTION USING MACHINE LEARNING Yograja G S R, Bhavani V K, Harshith D A,Himabindu N S
	IACIT-2021-PID-505	Prediction of Personality Characteristics using Natural Language Procession and Machine Learning & Sachin Kodagali, Venkatesh Prasad
	IACIT-2021-PID-506	Novel Deep Learning Approaches for Automated Taxonomic Identification of Plant Species of the Western Ghats Region A.M. Bojamma, Chandrasekar B.S
	IACIT-2021-PID-507	Classification and Precision Diagnosis of Endometrial Cancer – Survey Mr. Sachin Kodagali,Venkatesh Prasad
	IACIT-2021-PID-510	Facial Expression Recognition using Convolution Neural Network Sonu Suman, Shaik Mohammad Abdullah, Shaik Amman, Tv Poonam, Mallikarjun M Kodbagi
	IACIT-2021-PID-512	House Prices Prediction Using Statistics With Machine Learning Loai Nagib Alqubati, Kiran Kumari Patil
	IACIT-2021-PID-514	Predicting Revolving Credit Balance – A Machine Learning Approach Suchitra Saravanan, Geetha D

Data Mining & Artificial Intelligence-II

	Paper ID	Title & Authors
Session 1-B 10:30 am To 12:00 noon	IACIT-2021-PID-513	Advance Vehicle and Driver Profile Management Using Cloud Frameworks Nitin Narayan Shelar, P V Bhaskar Reddy
	IACIT-2021-PID-535	Lifecyle of KPIs in Cloud Networks Manjunatha Shivaswamy , Prabhakar M
	IACIT-2021-PID-544	Fortification for Cloud Data Pilfering: Using Attribute-Based Encryption Karthik A Patil, Pavan Swamy Hiremath ,Nithin Mohandas ,Biradar Vikas Mohanrao , Shruthi G
	IACIT-2021-PID-545	IoT Security Redefined: A Novel Towfish Algorithm Implemented in Cloud Service for a Smart Energy Meter Ashok Kumar N, Ramesh D
	IACIT-2021-PID-611	Fundamentals of Cloud Computing Using Microsoft Azure Portal Shilpa N R,Bhavana Y M
	IACIT-2021-PID-618	ANALYSIS OF DISTRIBUTION TRANSFORMER PHYSIOLOGICAL AND ELECTRICAL FAULT DETECTION - A SMART GRID APPLICATION Manohar BS, SantoshBati , Spandana, Shashikumar, Suhas Gowda C R , Pruthviraj N , Pruthviraj N
	IACIT-2021-PID-622	Cloud Native Microservice Architectural Pattern Manjunatha Shivaswamy, Prabhakar M
	IACIT-2021-PID-629	Cloud based student repository system M.L.Sree Charan Reddy Muthyala Vengal Reddy Nandavenkatesh Nayanashree N A, Thanuja K

Mobile Computing and Cloud Computing

	Paper ID	Title & Authors
Session 1-C 10:30 am To 12:00 noon	IACIT-2021-PID-523	A CNN-BASED SECURITY SYSTEM FOR CONTAINMENT OF COVID-19 AND OTHER VIRAL OUTBREAKS Arsal Imtiaz, Nachiket S., Nishanth K.V. 513, 535, 544, 545, 611, 618, 622, 629
	IACIT-2021-PID-526	Detecting Parkinson's Disease Using CNN- A Deep Learning Approach Nayana R, Venkatesh Prasad
	IACIT-2021-PID-528	A Machine Learning Approach For Tomato Crop Yield And Price Prediction Varsha Manohar Pujari, Vishwanath Y
	IACIT-2021-PID-534	OCARD: Object Classification of Automotive Radar Data Using Convolutional Neural Networks Reya Pillai R, Geeta C M
	IACIT-2021-PID-536	Comparisons on Logistic Regression, Random Forest, and CNN for Handwritten Digit Recognition Abdul Aziz Sahraee, Laxmi Rananavare
	IACIT-2021-PID-538	Facial Emotions and Behavior Monitoring System using DNN Raghavendra Reddy, Bindu Bhargava Reddy Chintam, Maram Venkata Naga SaiTeja, M Sumanth, Lokireddy Sai Siddhardha Reddy
	IACIT-2021-PID-539	A Novel Method for Fruit Detection and Calorie Estimation using CNN Jyoti Chalikar, Meenakshi Sundaram
	IACIT-2021-	Voice Based E-Mail System for Blind People Using Machine Learning

	PID-542	Sindhu S, Sanju V
Digital Image Processing & Sentiment Analysis-I		
Session 1-D 10:30 am To 12:00 noon 529, 530, 559, 566, 741, 743, 774	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-529	Tomato Grading: A New Approach for Classifying and Predicting Tomato Quality based on Visual Features Munnelli Poojitha, Vishwanath Y
	IACIT-2021-PID-530	Image Processing Technique for Authentication of Indian Paper Currency Rencita Maria Colaco, Narendra V G
	IACIT-2021-PID-559	Horticulture Crop Inventory Classification using Satellite Image Processing Dhruvakumar C Ramachandra, Mallikarjun M Kodabagi
	IACIT-2021-PID-566	3D Image Construction using Stereo Corresponding Point-Based Techniques Prof. Prabhakar M,Ganesh Gowda B C, Jayanth Kumar C, Gagan N C, Hrithik V
	IACIT-2021-PID-741	Data Pre-processing Issues in Medical Data Classification Ashwini M. Tuppad, Shantala Devi Patil
	IACIT-2021-PID-743	Employee Surveillance System Using Face Recognition Megha N, Ranjitham M, Rufina Mariam, Jahnavi K, Ranjitha U.N
	IACIT-2021-PID-774	Review on Existing Methods of Fire detection and Extinguisher System using Image Processing Gunasagari G. S, Poornima N, Ankitha S Bangar Pokala Sai Sparsha Prasad, Poorvi Pai Tanaya Mehta
Digital Image Processing & Medical Diagnosis-II		
Session 1-E 10:30 am To 12:00 noon	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-548	Fatigue Detection for Drivers Using Face Object Features Based On Aspect Ratio of Eyes and Mouth Santhosh. O, Dr. Sasidhar Babu Suvanam,Ganga D. Benal
	IACIT-2021-PID-550	Detection of drowsiness to ensure safety while driving Sunil Manol,Navneet Priya,Chaitra K,Kavya R
	IACIT-2021-PID-621	Food Taste Analysis Based On Facial Expression Detection Kamachi Gayathri ,K Yogesh, Karthik p , Manoj Maharrshi R M ,Prof. Kiran Kumar A
	IACIT-2021-PID-655	Coastline and River Banks Erosion prediction using Image processing Bhavan Gowda N,Manoj J,SurekhaThota,Mithun M,A R Manish Varma"
	IACIT-2021-PID-674	B.E.S.T : Basic Emotion & Sentiment Tracking Suman Kalyan Giri,Singam Mohit Reddy,Shubham Kumar Nay,ak,Suchet Bhakhan,Dr. Meenakshi S
	IACIT-2021-PID-675	Semi Autonomous Vehicle For Pot Hole, Humps And Possible Collision Detection And Avoidance Using Image Processing Manjunatha B G,Nataraj Urs H D,K S Ranjith kumar,Karthik R O,Kiran
	IACIT-2021-PID-726	Real-time Eye Tracking for Password Testimony Navitha c, Neha N, Prathiba v, Manoj A murthy, Aruna Kumara B
	IACIT-2021-PID-739	Recognition of car number plate using Computer Vision technique Bindushree DC, Gokul Dev, G Mohit, Govind Prajapat, Akshay Kumar
Natural Language Processing		

	Paper ID	Title & Authors
Session 2-A 12:00 Noon To 1:30 pm	IACIT-2021-PID-518	Design and Implementation of the Simulator for RiCoBiT Jude Abishek Satish, Hussam Taqhi, Harsh Mishra, Chetana Reddy P, Sanju V.
	IACIT-2021-PID-570	Criticality of SMS Encryption and its Importance for Genuine Two-Factor User Authentication Niran N
	IACIT-2021-PID-594	Password Encryption-Decryption Based Online Voting System Using OTP Anuj Aditya, Parvataneni Yuvaratna, Mohith T Reddy, K Diresh Kumar Reddy, Kotha Suraj Babu
	IACIT-2021-PID-619	Evaluating the Performance Metrics: Packet Delivery, End to End Delay and Throughput of FSR, AODV and ZRP Using NS2 Simulator Ms. B. Manimekala,Dr. Felcy Judith,Ms. Shruthi. SV,Mr. M. Jayaramu ,Mr. Nagaraj. C,Dr. S. Dinakaran
	IACIT-2021-PID-658	Detection of Phishing Websites Ankita Singh, A. Mahasmrti , Abhijeet Jena, Arbaaz Shibargatti, Sunil kumar Manvi
	IACIT-2021-PID-688	Study of cyberbullying & identifying the challenges in the native language Nikhil Kotak, Balaji Patil
	IACIT-2021-PID-731	Design of an Application Suite Using Distributed Computing & Distributed Storage Anirudha BS, Bibek Prasad Sahu, Chirag, Vishnu R Pillai, Mr. Naveen Chandra Gowda
	IACIT-2021-PID-781	NIDS: An Efficient Network Intrusion Detection Model for Security A. P. Bhuvaneswari,R.Praveen Sam,.C.Shoba Bindu
	IACIT-2021-PID-805	The File Encryption Application using AES-CBC MODE Vishnu sai bhonsle, Sailaja Thota, Bheema Jaswanth Reddy , B Sreekanth ,Baddiputi Vinod Kumar Reddy
IoT & Wireless Sensor Networks		
	Paper ID	**Title & Authors**
Session 2-B 12:00 Noon To 1:30 pm	IACIT-2021-PID-525	Android operated Quad-bot (IOT) Rishav Kumar Thakur , Abhishek Saurabh , Pradyumn p Gopinath R
	IACIT-2021-PID-540	ARDUINO BASED SMART ENERGY METER USING IOT Chandrika M, Dr Venkatesh Prasad
	IACIT-2021-PID-560	SMART ARM DRIVE ALONG WITH A CART-CUM-TRAY Shaima Nayeem, Sara Noor, Ashok Patil
	IACIT-2021-PID-562	AN ERGONOMIC SMART EYE DESIGNED FOR READING AND OBJECT DETECTION FOR BLIND PEOPLE USING IOT Prabhakar M, Rajshri Mudaliar
	IACIT-2021-PID-565	IOT BASED HOME AUTOMATION USING RASPBERRY PI Mr.Mounish Reddy, Mr.Naveen,Mr.Bharath,Mr.Venkat Sai, Priyadarshini R.
	IACIT-2021-PID-572	AN IMPLEMENTATION OF POLYGLOT VOICE SUPERVISE HOME DEVICE USING RASPBERRY PI Nidhi,Nisarga L, Pavithra V, Prakruthi E, Sohara Banu A R
	IACIT-2021-PID-631	Farming iiCopter

		Chaithra M H ,Basavarajeshwari Kuppi,Bhavya Shree S,Bhoomika H, G,Bhoomika T
	IACIT-2021-PID-643	IOT & ML BASED SMART IRRIGATION SYSTEM FOR WATER PUMP CONTROLL AND NOTIFICATION ALERT USING RASPBERRY PI Kavya NK, Kiran Kumari Patil, Shantala Devi Patil
	IACIT-2021-PID-657	Autonomus fire exhausting Robot M. Uma Vyshnavi, M.Pallavi Sai Parthish, L. Lokesh
Big Data Analytics		
Session 2-C 12:00 Noon To 1:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-531	Big Mart Sales Forecasting Sabreena Gulzar, Sunilkumar Manvi
	IACIT-2021-PID-596	Truth Discovery In Social Media Big Data Nirupama KS, Akram Pasha, Greeshma Reddy, Sree Chandana, Roopa
	IACIT-2021-PID-610	Big Data Enabled E-learning Recommender RITU SHENOY, SATHYA RUPA M, S MIRUDULA, AKRAM PASHA
	IACIT-2021-PID-650	SMART WAREHOUSE AND INVENTORY MANAGEMENT SYSTEM Sheelavathy K V , Ajay S, Samhita Vishwanath, Ankita K, Anmol M
High Performance Computing and Networks		
Session 2-D 12:00 Noon To 1:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-541	NILES: The Next-Gen Employee Chatbot Sharlene Rodrigues, Shivani K R, Shyni Supritha C,Shravani J A,Nikhil S Tengli
	IACIT-2021-PID-567	Augmented Reality Based 3D Furniture Shopping Divyashree R, Vibha Shreya Raju, Roja J, Vinutha B,
	IACIT-2021-PID-575	Campus Interactive Chatbot for Students Varun Kumar S, K Amuthabala
	IACIT-2021-PID-580	VR game with hand detection for interaction with AR objects Nitesh V, Nitish Durairaj, Navaneet Manikandan,Yogesh R, Shruthi *G*
	IACIT-2021-PID-607	Augmented Reality Based Restaurant Menu Ranjitha Rg, Sai Lakshmi.P, RohiniRaja, Farooque Azam
	IACIT-2021-PID-638	VIRTUAL ASSISTANT: BAYMAX Anirudh. J, Anup Ranjan Sabat, Ayush.V, Ashish N.T, Syed Muzamil Basha
	IACIT-2021-PID-761	ARFA-QR code based Furniture Assembly using Augmented Reality Ashok K Chikaraddi , Suvarna G Kanakaraddi, Shivanand V Seeri , Jayalaxmi G Naragund,Shantala Giraddi
	IACIT-2021-PID-767	Assistive Device for Blind, Deaf, and Dumb Sathish G C, Keerthi Raj K B, Himapoornashree K S, Duddukunta Yeshwanth Kumar Reddy, Lavanya J S
	IACIT-2021-PID-794	Health Care Chatbot Assistant system Bhaskar Reddy PV
Augmented & Virtual Reality		
	Paper ID	**Title & Authors**

Session 2-E 12:00 Noon To 1:30 pm	IACIT-2021-PID-602	Voice Based Email For Visually Impaired M Yamini, Manisha C, Anusha M,Manasa M, Nimrita Koul
	IACIT-2021-PID-627	A SYSTEM AND METHOD FOR REAL TIME SIGN LANGUAGE TO SPEECH CONVERTER Sucheth G,Ashok K Pati,Mithun Surve,Shashi Dha,
	IACIT-2021-PID-672	Text Generation Tool for Writing Assistance using Transformer Shubham Baid,Shubham Agarwal ,Rupera Jalay Rajeshbhai ,Kiran M
	IACIT-2021-PID-797	Deep Study Of Estimation Analysis on Twitter Data Ayesha Siddiqua killedar , Bhaskar Reddy P.V
IoT and Healthcare		
Session 3-A 3:00 pm To 4:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-522	RFID BASED HEALTH MONITORING SECURE SYSTEM ON IOT MADHU MA, ShantalaDevi Patil
	IACIT-2021-PID-583	IoT Based Health Monitoring System Arnav Bahuja, Aarthi A, Adarsh Shivam, Archana Shivakumar, Ananda Shankar A
	IACIT-2021-PID-664	Eyes and Voice controlled Wheelchair Jyothi V ,Rachana C, Snehal Rathi, G.Pooja, Udaya Rani.V
	IACIT-2021-PID-667	Heart Attack Detection And Heart Rate Monitoring Using IOT Deepak, Ammati Charan Kumar , Anusha.P, Shivasharanappa ,Mallikarjun Shastry P.M
	IACIT-2021-PID-752	IOT based Fall Detection for elderly people Ajil A,Sumanth Kaushik K, Sheetal J, Preethi, Sapna R, Sumathi V, Rachel Sandra, Tajudheen TK
Educational Systems Design & Web-based Learning		
Session 3-B 3:00 pm To 4:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-524	Chemistry with Java Mohammed Ameen, S Nisarg Devdhar, Noronha Carlton Sebastian, Vaishnavi M P, S Raghavendra Nayaka P,
	IACIT-2021-PID-549	Web Based Data Visualization and Data Preprocessing Tool Sahil Chachra, Resham Sundar Kumar, Santosh D Kolur, Rohit K, Priyanka Bharti
	IACIT-2021-PID-558	Web-Based Expense Approval System Ayyagari Sai Ashish,Bimbisara P,B.G. Akshith Kumar Reddy ,Darshan S Honnappanavar ,Ranjitha U.N
	IACIT-2021-PID-582	Automated Questions Unique Arrangement Akanksha Sharma, Adarsh Anand, Saket Savarn, Dr. S.S. Manvi
	IACIT-2021-PID-584	Fake Indian Currency Detection App Vishal Nandy, Prince Saji, Sridhar NS,Yashwanth Kumar MS, Mallikarjuna M
	IACIT-2021-PID-599	Research Bolster- A Web Based Digital Library Application for Research Assistance Sridevi Kashinath Alawandi, Smitha T.M, Tanuja S.P, Ambika B.J
	IACIT-2021-PID-600	Web Application of College Event Management Veeragommula Suresh, A Lohith, Dasari Bhulakshmi, T Rohith Reddy, U Naveen

	IACIT-2021-PID-633	Parikshik - Online examination system Spoorthi Rakesh, Rashmi U, Priya Kothar, Rishabh Sahu, Rachana Patil
	IACIT-2021-PID-637	VOICE BASED E-MAIL FOR VISUALLY IMPAIRED Ramya Bhat,Ramya Bhat,Ramya M,S Anusha,Vinay Kumar M
Data Mining & Artificial Intelligence-III		
	Paper ID	**Title & Authors**
Session 3-C 3:00 pm To 4:30 pm	IACIT-2021-PID-543	Survey on DNS over HTTP's using various Machine Learning Techniques Mrs. Swathi Darla,Minal Moharir
	IACIT-2021-PID-551	Sign Language Recognition using Convolutional Neural Networks in Machine Learning Aishwarya Girish Menon,A. Abhishek , Anusha S.N ,Gopinath.R ,Arshia George
	IACIT-2021-PID-552	Radical Sound Valuation of Fetal Weight with the Use of Deep Learning Keerthana. P, Dr. Sasidhar Babu Suvanam ,Vijayalakshmi Yellepeddi
	IACIT-2021-PID-556	FACIAL MASK RECOGNITION USING MOBILENET AND COMPUTER VISION IN REAL-TIME VIDEO STREAMING Vivek Kumar,Krishna Nand Pandey,Vinayak Srivastava,Suryansh Kaushik,Veerpal Kaur
	IACIT-2021-PID-557	Forecasting Air Quality Using Random Forest Regression with Hyperparameter Optimization and LSTM network(RNN) Natasha Suman,Akshobhya Rao BV,Ranjitha U N
	IACIT-2021-PID-573	Smart Kisan – A Machine Learning Based Agricultural Portal Sahana R, P.M. Mallikarjuna Shastry
	IACIT-2021-PID-578	REAL TIME OBJECT DETECTION WITH SURVEILANCE VIDEO USING CNN ALGORITM Shiva Kumar R Naik, K Sai Ajith, K Varun Reddy, K Siva Theja, K V V Pavan Kalyan
	IACIT-2021-PID-586	Deep Learning Methods on Chest X-Ray Radiography for Detection and Classification of Thoracic Diseases: A Survey Roshan Shetty, Prasad Narasimha Sarappadi
Data Mining & Artificial Intelligence-IV		
	Paper ID	**Title & Authors**
Session 3-D 3:00 pm To 4:30 pm	IACIT-2021-PID-553	Transparent Medical Health Insurance System using Blockchain Technology Vishnuvardhana Reddy , G Parthasarathy
	IACIT-2021-PID-793	Secure Document Vault using Blockchain and IPFS Pradeep D,Surekha Thota,Samuel Nitesh John,Shashank M S,Viresh Sharnappa Karadi,
	IACIT-2021-PID-795	Food Supply Chain Using Blockchain Technology Preethi Srivatsa,R Lisha,Lipica Naidu,Mamatha K M,SurekhaThota
	IACIT-2021-PID-815	A Blockchain-based Framework for Transparent Medical supply in Covid-19 Pandemic and Covid tracker. Deep Vashisth,Farooque Azam,Avadhesh Kumar Singh,Ashish Chauhan
Blockchain Technology		
	Paper ID	**Title & Authors**
	IACIT-2021-	Face Mask Detection Using CNN and OpenCV

Session 3-E 3:00 pm To 4:30 pm	PID-617	Amogh J Tambad, Aditya GT, Aman Kumar Srivastava, Akash Hadagali, Thirumagal E
	IACIT-2021-PID-625	An Approach For Loan Approval Prediction using Machine Learning Anusha G, K Thanusha Reddy, G Tanmayee, G Roopa, Vani Krishnaswamy
	IACIT-2021-PID-632	Efficient Face Mask Recognition Method during the Covid-19 pandemic using CNN. Tejaswini B,K.Amuthabala
	IACIT-2021-PID-642	Real Time Face Mask and helmet detection Using YoloV3 Algorithm. Apoorva M Y, Surendra Babu K N, Asmita Rani, Anjali Srivastava S, Anusha Reddy
	IACIT-2021-PID-644	Classification of Diabetic Retinopathy using Convolutional Neural Network Rakshita B Raju, Raj Chandan Goyal , Vikas S Biradar, Praveena S, K Amuthabala
	IACIT-2021-PID-653	Unusual Event Detection in ATM Using Machine Learning Soundarya R P,B Pooja Reddy , Akshitha A, Anusha R, Ananda Shankar
	IACIT-2021-PID-662	ReDoc – Extracting relevant data from documents using Google Tesseract and HAAR classifiers Sha Abdul Khudus, Shad Danish Akhtar, Shaarun Ajish George , Manasa S.B, ,Nikhil S Tengli
	IACIT-2021-PID-671	Non contact advanced method of COVID-19 classification using deep learning with chest x-ray images Shagufta Samreen
Mobile Applications		
Session 4-A 4:30 pm To 6:00 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-532	"NAMMA SHIMOGA"- AN ANDROID APPLICATION TO REGISTER COMPLAINTS Tilak S K,Sanju V
	IACIT-2021-PID-606	ShopChain: An Android Application simplifying the shopping experience in day to day life Chirag Vijay, Clinton Jude Noronha, Chatakondu Venkata Karthik, Devika Vijayan, Vinay Kumar M
	IACIT-2021-PID-678	KRISHI SEVA BANDHU: MOBILE APP FOR GRADING FRUITS AND VEGETABLES Kanishk Vijaywargiya, Manjunath S. Kemali, Shreyas V., Sunilkumal Manvi
	IACIT-2021-PID-681	PETERIA: PET SHOPPING MOBLIE APPLICATION KothakotaCharitharth, LaluPrasad, Tejus , Suraj K, Raghavendra Nayak
	IACIT-2021-PID-733	E-Commerce website for B2B Services Sathish G C, Harish Naidu Gaddam, Manohar Kommi, Thejesh Manduru, Likhitha S
	IACIT-2021-PID-800	UNIVERSITY WEB APPLICATION Shantala Devi Patil, Yashas Raju N,Vishal Shenduri,Chidanand M,Y Vinay Kumar
Advanced and Emerging Applications		
Session 4-B 4:30 pm To 6:00 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-576	Enhancing Security Authentication of Information Systems using Morse Code and Facial Recognition Tejas Purvimath S, Dr. AshwinKumar U M

	IACIT-2021-PID-577	Protected JPEG Flows Reversible Data Hiding Chandra Mouli C V, Bindush U , Hemanth Sai, Papisetty Balaji, Vishwanath R Hulipalled
	IACIT-2021-PID-592	Crypto Tech-Coinage Predictor Deepika N, Chandana T C, Dishani Haldar, Chaithra M H
	IACIT-2021-PID-593	Next Gen Learning universe Dr. M Prabhakar, Parvataneni Yuvaratna, Mohith T Reddy, K Diresh Kumar Reddy, Kotha Suraj Babu
	IACIT-2021-PID-588	Asynchronous Execution Platform for Edge Node Devices Pratyush Singh, Sai Krishna, Rithik Kumar Jha D, Dr. K Amuthabala Rohit Raj
	IACIT-2021-PID-614	PC VISION BASED UNPRETENTIOUS CLASSROOM ATTENDANCE TRACING FRAMEWORK/TECHNIQUE AKSHAYA B, SANJAY SHYAM ,SHIVSHANT M ,SHILPA NR, ANNAPURNA, AKSHAYA B
	IACIT-2021-PID-636	PLANT DYNAMICS: Triticum infection disclosur Kusuma D Keerthi K N Manasa C H Lekhana J Soumyalatha Navee
	IACIT-2021-PID-652	GAME DEVELOPMENT USING UNREAL ENGINE 4 Shehan J Silva, Hemanga Borpatra Gohain, Pooja KN, Chilaka SyamChand, Rohini G

IoT & Smart City

	Paper ID	Title & Authors
Session 4-C 4:30 pm To 6:00 pm	IACIT-2021-PID-626	Smart Battery Management System for Electric Vehicles Gayana A Jain, Chinmayee V Bhat, Manohar B S
	IACIT-2021-PID-676	FIRE DETECTION AND NOTIFICATION USING NODEMCU AND RELAY BY IoT IN PRIVATE BUS Poojasree S,Udaya Rani.V
	IACIT-2021-PID-691	Smart IoT Mirror using Raspberry Pi Ashwinth Singh P,Mohammed K C,Madhav A,Mayank Bajaj,shilpa V
	IACIT-2021-PID-725	PORTABLE DEVICE FOR HEALTH MONITORING OVER IoT R Balaji, S Reddy Mohan Raju, K Dhanunjaya Reddy, S Ashok , K Durga Prasad
	IACIT-2021-PID-727	HOME AUTOMATION USING SMART AI ASSISTANT Bindushree DC, G Sai Sandeep, G Sai Charan, Gaurav Suhag, G Karthik
	IACIT-2021-PID-728	Smart Cars - Predicting Future Customers K.Ajith raj, G.Joshna chowdary, K.Ruchitha, G.Sumanth, Shashikala N
	IACIT-2021-PID-813	AN IOT BASED APPLICATION FOR THE SAFETY OF WOMEN VAMSHI.S,Vinay kumar.v

Emerging Trends

	Paper ID	Title & Authors
Session 4-D 4:30 pm To 6:00 pm	IACIT-2021-PID-628	Comparative Analysis of Algorithms used for Twitter Spam Drift Detection Libina B Thomas, Mona Nirvinda P,N B Mounika, Lalitha L A, Vishwanath R Hulipalled
	IACIT-2021-PID-680	Detection of Coronavirus illness using Techniques of Deep Learning and CNN Faiza, FarheenKauser, G.Lalasa, K.V.S Kiran Moyi, Aruna Kumar B

	IACIT-2021-PID-684	Parkinson's Disease Detection from Spiral and Wave Drawings using Convolutional Neural Networks Bhavana N, Mallikarjun Shastry
	IACIT-2021-PID-808	DIABETES DISEASE PREDICTION USING MACHINE LEARNING ENSEMBLE METHOD Yerasi Jayasimha Reddy, Yerasi Kedarnath Reddy, Rahul David, Rahul Vasishta, Anilkumar Ambore
	IACIT-2021-PID-810	Heart beat level prediction using Machine learning Algorithms N.Naveen Teja , A.Ajil ,Gandireddy Gari Yoga Nanda Reddy , Gandhaveeti Yeswanth Reddy
	IACIT-2021-PID-816	Data Placement Algorithm in Heterogeneous Environment Utilizing Data Locality Anilkumar Ambore, Udaya Rani.V
	IACIT-2021-PID-817	Estimating the impact of Engineering education among students in India using Machine Learning and Deep Learning Techniques Syed Thouheed Ahmed, S Bharath Bhushan, T Aditya Sai Srinivas, Syed Muzamil Basha, P V Bhaskar Reddy
Data Mining & Artificial Intelligence-V		
	Paper ID	**Title & Authors**
	IACIT-2021-PID-660	Soil Health and Cattle Graze Checker Divyanshi Pathak, Badrinath Samantary, Harsh Abhinandan
	IACIT-2021-PID-666	Educational And Immersive Game Development K S Adarsh,Gururaj Suresh Babu,Harish Kumar,Hruthik C K, Dr. Venkatesh prasad K S
	IACIT-2021-PID-687	Using Hyperlocal Delivery System to accelerate Localised Business Shivendra Saurav, Sriyansh Ghosh, Shubham Kumar Singh, Suhani Jain , Kiran M
Session 4-E 4:30 pm To 6:00 pm	IACIT-2021-PID-695	Intrusion detection recording system with biometric lock Lincy V J, P V Bhaskar Reddy, Monica Patel T, Muskan Kesharwani, N Raksha
	IACIT-2021-PID-702	BYOS-Be Your Own Saviour Maheen Huda, Merlyn R,Mahasweta Datt, Mihika Bhandari, Anitha K
	IACIT-2021-PID-709	Smart System For Document Verification K. Rukesh Sai, M. Sainath Reddy, K. Jithendra, K. Pavan Sai Prof. Shashikala.N
	IACIT-2021-PID-710	Identification of Abnormality in Leaves M Vijay Bhargav Reddy, D Mouli, Divya Sree G, C Vishwanath, Prof Surekha Thota
	IACIT-2021-PID-714	E-FARMING SYSTEM Shanthala Devi V, Vani Krishnaswamy, Sherin Sara Thomas, Sindhu D P, Shalini
	IACIT-2021-PID-790	E-FITNESS PROMOTING FOR YOGA AND EXERCISE FOR HEALTHY LIVING PROF.SHALINI TIWARI

REVA UNIVERSITY
Bengaluru, India

Schools of CSE and CIT

Third International Conference on Advances in Computing & Information Technology

(IACIT – 2021)

Day – 2: Paper Presentation Schedule

Tuesday, 18th May 2021		
Data Mining & Artificial Intelligence-VI		
Session 1-A 10:30 am to 12:00 noon	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-574	TWITTER SPAM DETECTION Chandana N, Anuradha H.K, Arjun J Naik, Amit Kumar S, Sohara Banu A R
	IACIT-2021-PID-591	Face Mask Detection– A Machine Learning Approach Mounusha S, Dr. mallikarjuna Kodabagi
	IACIT-2021-PID-597	Cardiovascular Disease Prediction using Machine Learning Ensemble Methods Vandana Joshi, Shruthi R, Varshitha B, Devarasetty Vivek Kumar, Mallikarjuna M
	IACIT-2021-PID-604	Smart approach to decrease traffic congestion using Deep Learning Muskan Mahayash, Neelakshi Punia, Nishtha Tripathi, Sarvamangala D R
	IACIT-2021-PID-605	Distracted Driver Detection using Convolutional Neural Network Ruthuparna M Patil, M Mallikarjuna
	IACIT-2021-PID-612	IMAGE RECOGNITION USING DEEP LEARNING Aditya Bhosle, M. Mallikarjuna
	IACIT-2021-PID-615	Inference of Gene Regulatory Networks using Information Theoretic Measures and K-Means Clustering Arpitha S, Nimritha koul, Sunilkumar Manvi
Data Mining & Artificial Intelligence-VII		
	Paper ID	**Title & Authors**

Session 1-B 10:30 am to 12:00 noon	IACIT-2021-PID-649	Automation of Database replication and sentiment analysis of the replicated data Gajanan Naik,Ashwin kumar Motagi
	IACIT-2021-PID-665	Smart Attendance Monitoring System Using Face Registering ANKUSH KUMAR RANJAN,RAHUL,PAVITHRA S
	IACIT-2021-PID-669	The Importance of Data Visualization in Exploratory Data Analysis P.V BHASKAR REDDY, PATEL DARSHAN RATILAL
	IACIT-2021-PID-692	Pneumonia detection using Chest X-ray Images Chaithanya R, B T Namitha Urs, Chandan B, Chandrashekar K, Manjunatha P C
	IACIT-2021-PID-804	Sentiment Analysis To Improve Teaching and Learning SAI ARPITA P KUSTAGI,SAISUSHMA PATIL,PRIYANKA N, PRABHURAJ
	IACIT-2021-PID-814	Kannada Text Detection in Scene Images using Image Processing Shahzia Siddiqua,Sunilkumar S.Manvi,C.Naveena
Machine Learning		
Session 1-C 10:30 am to 12:00 noon	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-694	Sign Language Recognition Using Convolutional Neural Network Reeshav, Vaishnavi Das, Veena V, VishwaMeti, Prof.Manjunath P C
	IACIT-2021-PID-707	Supervised Machine Learning Models Based Prediction of Covid-19 Bhaskar Reddy P. V, Y. Sathya Tejaswi, Y. Sai Lakshmi
	IACIT-2021-PID-708	IT EMPLOYEE STRESS PREDICTION BY USING MACHINE LEARNING AND COMPUTER VISION TECHNIQUE Reeja S R, Lavanya S, Monish L, Abdul Basit Lone
	IACIT-2021-PID-718	CONVERSATIONAL AI AGENT FOR EDUCATIONAL INSTITUTE USING NLU AND LSTM ALGORITHM Anooja Ali, B. Purushotham Naidu, L. Vyshnavi, M. Poojitha Reddy, P. Kiran Kumar Reddy
	IACIT-2021-PID-719	Predictive Analysis and Comparison of various Models on eSports Competitions Adarsh A. Nair, Abdul Mateen, Aniketh V. Hotagi, Ankit Kumar, Kiran M
	IACIT-2021-PID-723	MACHINE LEARNING BASED BREAST CANCER DETECTION USING LOGISTIC REGRESSION Taraniya.I, Bhaskar Reddy PV, Yeddula Divyasri, Varshini Chaithra, Nalam Lakshmi Raviteja
	IACIT-2021-PID-729	INFERRING GENE REGULATORY NETWORK BASED ON BAYESIAN MEAN AVERAGE METHOD Aruna A S, Sunilkumar S Manvi, Nimrita Koul
	IACIT-2021-PID-734	Disease Prediction and Medicine Recommendation System Palagiri Mohammad Reehan, Nikhilesh, Revanth, Venkata Vikas Chandra, P, Sasidhar BabuSuvanam
Digital Image Processing & Sentiment Analysis-III		
	Paper ID	**Title & Authors**

Session 1-D 10:30 am to 12:00 noon	IACIT-2021-PID-748	Facial Emotion Recognition and Chatbot Model To Enhance the Emotion Detection Using Machine Learning, Tanisha Majumder , Kajal , Vijay B , Santhosh S R, Vinay Kumar M
	IACIT-2021-PID-755	AI CHESS GAME WITH VOICE COMMANDS, Chandana A S, Chethana A S, Shubha Shree N, Thanushree D K, Reeja S R
	IACIT-2021-PID-756	Design and development of a safety system for Motorbike incorporated with artificial intelligence, Kavana K, Kavya SM, K Rajitha Ravali M
	IACIT-2021-PID-757	Review on Algorithms, Theory of Generative Adversarial Networks applied to Constrained Image synthesis, Raghavendra M Shetty K Prasad Narasimha Sarappadi.
	IACIT-2021-PID-763	DDIHQ: Drug-Drug Interactions using Hybrid Quantum-Classical Optimization Neural Networks, Alpha Vijayan,Chandrasekar B.S
	IACIT-2021-PID-766	Phishing Websites Detection and Evaluation using Machine Learning, Bhavatarini N , Kirankumari Patil ,Sachin S, Vishwanath Y,Supreeth
	IACIT-2021-PID-769	Convolution Neural Network Based Prediction for Eye Gaze Estimation, Arpitha G and Meenakshi Sundaram A.
	IACIT-2021-PID-771	Deep Learning Based Image Classification Using Small VGGNet Architecture, Raghavendra Nayaka P, Sudeep B.D Shivaprasad S N Siddeshwar Prasad Sangram N.
Data Mining & Artificial Intelligence-VIII		
Session 1-E 10:30 am to 12:00 noon	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-772	Human Activity Recognition Based on Deep Convolutional Neural Network, V Siva Brahmaiah a, Subhajit Roy , Lone Faisal , Pradeep Sharma
	IACIT-2021-PID-773	Identification Of Cyberbullying On Twitter Using Sentiment Analysis & Machine Learning, Nikhil Kotak , Balaji Patil.
	IACIT-2021-PID-776	Handwritten Character Recognition with Convolutional Neural Networks, Jeffery Ho Kin Pou, H Keshav Rao, Geetansh Bhambhani, Joel Joseph Nimrita Koul.
	IACIT-2021-PID-789	DETECTION OF PLANT DISEASE USING MACHINE LEARNING, Wilona Maria Furtado, Shantala Devi Patil
	IACIT-2021-PID-792	Automatic Kidney Lesion Detection for CT Images Using Morphological CNN, Archana. P, Chiranth. M. V, Chethan. S, Jeevan Reddy. K. N,Sanketha. Gowda. A
	IACIT-2021-PID-798	A Survey on Road Traffic Congestion Prediction and Recommender System, Vishwanath Y, Surekha , Sharad Muzumdar
	IACIT-2021-PID-802	Voice-Based Email For Visually Challenged, Madhuri Vijay, Dasari Bhulakshmi , Megha Shree C, K B V M Madhusudan Reddy.
	IACIT-2021-PID-819	A Supervised Text classification approach based on variants of Naive Bayes and Gradient Ascent Syed Muzamil Basha, Vindoha K, Thanuja K, Sajeev Ram Arumugam, P V Bhaskar Reddy
Data Mining & Artificial Intelligence-IX		
Session 2-A	**Paper ID**	**Title & Authors**
	IACIT-2021-	Covid-19 prediction using Human X-rays based on Convolutional Neural

12:00 Noon to 1:30 pm	PID-502	Network Smit Soni, Snehasish Banik, Shubham Kumar Giri, Shiwani, Sailaja Thota
	IACIT-2021-PID-554	FRUIT RIPNESS ASSERTION USING DEEP LEARNING A. Kanthi Kiran Reddy, L. Vasista C Reddy, A.V. Guna Sekhar Reddy, A. OmPrakash Goud, Ajil A
	IACIT-2021-PID-589	REAL-TIME ANTI SPOOFING FACE DETECTION WITH MASK USING CNN Amoolya M,Amrutha B,Ambika Y N,Alok R Patil, Prof.Thirumaga E
	IACIT-2021-PID-603	Determining Efficient Machine Learning Techniques for Grading of Knee Osteoarthritis Bhavana V ,NallapaReddy Pooja, Shalini V R, Sarvamangala D R
	IACIT-2021-PID-630	Prediction of Prenatal Infants birth weight in Pregnancies Sahana.L.S, Dr.Thilaiarasu
	IACIT-2021-PID-670	ANALYTICS OF PHISHING ATTACKS USING MACHINE LEARNING Lingampally Shalini, SunilKumar S. Manvi
	IACIT-2021-PID-754	COVID-19 DETECTION USING DEEP LEARNING Darryl Andrade, Davin S. Thomas, Gyandwip Das, Reeja S R
	IACIT-2021-PID-777	Facial Emotion Recognition usign CNN Meghana PG, Mohammad Yusuf Khan, Kalpesh Mohanta, Mahesh Bharti, Kanaiya V Kanzaria
IoT & Wireless Sensor Networks		
Session 2-B 12:00 Noon to 1:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-521	Wearable Sign Language Detection System By Using Convolutional Neural Network Raghavendra Reddy , Nishanth B Jain, Palash Sharma, Likhitha V, Mustafa Shihab Assadi
	IACIT-2021-PID-537	Heart Disease Prediction Using Machine Learning Ensemble Drawpada Sharma, Vishwanath R.H
	IACIT-2021-PID-598	Identifying Real and Fake Job Posting using Machine Learning Sherina Sara Jaison,Mallikarjuna Kodabagi
	IACIT-2021-PID-608	AI THERAPIST Arghya SinghaMahapatra, Anubhav Lal Dass, Astha Pandya, Nimrita Koul
	IACIT-2021-PID-623	Credit Card Fraud Detection using Machine Learning S.Nikhitha,Sworup Nayak,Shivani Saha,G.Harshavardhan,Prof.Nimrita Koul
	IACIT-2021-PID-656	Pothole detection using CNN , OpenCv and Keras backed by Tensorflow Basavaraj S. Hadimani, Aafreen, Abhishek Sharma, Aryan Singh, Supriya K
	IACIT-2021-PID-742	Certain Investigations of prediction on Stock trend using various Optimization Techniques Abhishek Gowda S, N Thillairasu
	IACIT-2021-PID-744	Recognition of Sign Language using Deep Neural Network Sarvamangala D R
Data Mining & Artificial Intelligence-X		
Session 2-C 12:00 Noon to 1:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-533	Smart Waste Management System Aniket Mehta, Ashmita Kumari Jha,Sanjiban Chakraborty, Shaheen Sheikh

	IACIT-2021-PID-547	REVA Smart Automated Parking System using RFID Sanketh M V, P Rithvik Reddy,P Akhileswar, Soumyalatha Naveen,
	IACIT-2021-PID-579	Solar Driven Agribot for farm irrigation Sankar Sreenath, R Devendranath Reddy, P Shiva Kishore Reddy, R Saikarthik,Geetha B
	IACIT-2021-PID-585	FIRE DETECTOR AND EXTINGUISHER ROBOT WITH ALERTING MECHANISM Shivani Sharma, Soumyashree D. S, Srilatha M. N, Swati S. Mathpati, A. Ajil
	IACIT-2021-PID-668	SOLAR POWERED IRRIGATION SYSTEM WITH IOT CONNECTIVITY AND FARM MONITORING Abhinaya A, Anusha R, Arpitha K M, Anjali Jaishwal, Manju More E
	IACIT-2021-PID-812	IOT BASED HUMAN DETECTION ROBOT SYSTEM DURING DISASTER Sai Siva Teja.N, Mahendra Reddy.B, Obulesh.G, Vaishnav.P, Kundhan.T, Sapna R,Preethi
High Performance Computing and Networks		
Session 2-D 12:00 Noon to 1:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-563	A Modified User based Collaborative Filtering Approach for Personalized Clothing Application Chakala Sai Venkat, Farooque Azam, Chejarla TejaSundar Reddy, Bekkem Gopi Amarnath Reddy, Bojja Vamsi Kalyan Reddy
	IACIT-2021-PID-635	Secure and Verifiable Access Control Scheme for Data Security Manoj Kumar L , Pooja J Rajamani , Namratha D P, Priyanka Bharti
	IACIT-2021-PID-784	Automobile Parts Management System - A novel strategy for your Automobile SHAIK AMAR, SUNKARA SIDDHARTHA, SHABARI GIRISHA G S, SYED OMAR AHMED, LITHIN KUMBLE
	IACIT-2021-PID-787	A New Hybrid Diffie-Hellman and Caesar Cipher Algorithm for Cryptography Manoj Sharma V , Manthan N R, Lalith Kumar Nitesh Kumar Mehtha, Krishnapuram Kalyan Kumar Reddy , Shaik Hussain S I
	IACIT-2021-PID-807	Review on Ant Colony and Harmony Search Algorithm in MPLS-MANET Network Ambika B J, M K Banga
	IACIT-2021-PID-818	Outbreak of Glacier in Antarctica: Movement Analysis using Remote Sensing Data VijayaGeetha R, Ravi Kumar Poluru, S.RamaSubba Reddy, Syed Thouheed Ahmed, P V Bhaskar Reddy
Data Mining & Artificial Intelligence-XI		
Session 2-E 12:00 Noon to 1:30 pm	**Paper ID**	**Title & Authors**
	IACIT-2021-PID-571	LSTM-Based Air Quality Prediction Bhoomika H P, Chandana L, Lavanya G M, Vishwanath R Hulipalled
	IACIT-2021-PID-697	Continuous Emotion Recognition from Facial Expressions Using CNN Architecture Kishan K Nayak, Prabhudev N, Rohan A R, Venkatesh G ,Raghavendra Nayak P
	IACIT-2021-PID-706	Comparative study and analysis on Multi-class classification using Naïve Bayesian approach & Support Vector Machine

		Abijith Sandur,Revanth U KaranthS K Jayanth,Rahul S,Asha K
	IACIT-2021-PID-746	LICENCE PLATE DETECTION USING MACHINE LEARNING Navjeevan Chaudhary,Sunil Kumar S. Manvi
	IACIT-2021-PID-762	Xception:Facial Expression Detection using Deep Learning Techniques Suvarna G Kanakaraddi, Ashok K Chikaraddi, Shivanand V Seeri, Jayalaxmi G Naragund, Shantala Giraddi
	IACIT-2021-PID-806	Automated Monitoring and Attendance based on ML using Face recognition DHANUSH S N, KOUSHIK R, MUKUL B, PONGUPALA PAVAN KUMAR, SUNIL MANOLI
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Efficient Channel State Information (CSI) Estimation Using Deep Learning Techniques for Future Generation High Speed Networks

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[IACIT-2021-PID-501]

***Abstract*—** Medium capacity and energy efficiency of a network can enhanced using a suitable Multiple Input Multiple Input (MIMO) architecture which highly depends upon effective estimation of Channel State Information (CSI). Therefore, a deep learning framework is introduced in this article for the effective estimation and reduction of critical Channel State Information (CSI) overhead using massive Multiple Input Multiple Input (MIMO) architecture along with cloud technology. The proposed DP-MIMO model can enhance efficiency of CSI feedback medium as well as enhances accuracy of signal transmission and quality of signals significantly. Utilization of Cloud Computing and Big Data technologies can be very effective in expanding network access capability in 5G technology. Moreover, the dataset utilized for obtaining simulation results is developed using proposed DP-MIMO architecture after training of COST2100 channel model. The performance results obtained using proposed DP-MIMO architecture are highly superior to other state-of-art original and the normalized techniques in terms of NMSE and pi.

Cotton Leaf Disease Detection Using Machine Learning

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[IACIT-2021-PID-503]

Abstract– Diseases related to Plants are one of the most common problems around the World. So, in order to eradicate these issues, there are Certain Solutions that came up in this fast moving world. Certain methods must be Implement in order to identify the disease that should be present in any part of the whole plant. Nowadays the many Advanced Technologies that has been introduced to helps the farmer to get rid of these certain types of plant diseases. In order to increase the crop productivity, theobservation and analysis of the plant are the steps that we have to be scope on more. Healthy plants that yields good crops. In our proposed system, we have to first capture the defected cotton leaf and those images are then converted into standard resolution, and then pre-processed and those are stored in the database. ANN is trained to achieve the output efficiently with the relatively minimum errors. Where, it can identify the disease present in the cotton leaf. The Edge-detection algorithm is using to the pre-processed images of the cotton leaf. For the extraction process like colour, shape and for other specific features we applied the k-means

clustering techniques. Also, support vectormachine classifier is also used to compare the fact with the training datasets. Overall techniques we used, gives the efficient detection of diseases that is present in the certain leaf.

Prediction of Personality Characteristics Using Natural Language Procession And Machine Learning

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***Abstract*—**Personality predicting is a supreme component for a person's universal evolution. One of the familiar personality prediction test observed in people is Myer Briggs Test Indicator. This type of tests are usually supervised by psychiatrist, it is a unchallenging method to encourage people to get their examination about personality type of their own option, as these query are very elementary. In this paper we perform classification of person's personality into 4 out of 16 traits in accordance with the Myers-Briggs Personality test. The last 50 posts of a person on social media are used as the training data. Natural Language Processing is used for extraction of features from dataset anddifferent Classification algorithms have been implemented. Our model is trained with different type of dataset and performance of the model is explicitly tested by applying Naïve Bayes and Support Vector Machine algorithm. The prediction of a person's personality is based on their responses.

Novel Deep Learning Approaches for Automated Taxonomic Identification of Plant Species of the Western Ghats Region

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***Abstract*—**This paper explores two novel deep learning models inspired by the convolution neural Networks implemented to identify different plants based on their leaves' distinct features. The paper also speaks about creating a novel dataset for the plants of the Western Ghats region. They are inspired by pre-trained models such as the VGG16 and ALEXNET. A study regarding the comparative analysis of the methods is given in this paper.

Classification And Precision Diagnosis Of Endometrial Cancer - Survey

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***Abstract*—**Diagnosis of Cancer type is as important as the right classification of benign and malignant tumor cells. It is also very critical to achieve precision diagnosis to help doctor's find better clinical outcomes. Endometrial cancer begins in the uterus and is mostly detected at an early stage because it frequently produces abnormal vaginal bleeding and hence it becomes critical to not only classify the tumor but also to detect the type and grade of the cancer.
In the United States, endometrial cancer is one of the top five leading cancer types with 52,600 unique cases reported in the year 2014. This number raised to 60,050 in the year of 2016, and these numbers are further estimated to increase to around 61,880 in2019. The dataset used is composed of radiology and pathology images from Corpus Endometrial Carcinoma (CPTAC) Patients. This paper uses the Machine learning approaches that will classify the cell as malignant or benign. Deep learning approaches are used to provide Precision diagnosis that provides better outcomes to the clinicians. Convolution Neural Network algorithms have been successfully used in diagnosis of Brain tumor, Skin Cancer and similar approaches can be used to tackle this problem.

Facial Expression Recognition Using Convolutional Neural Networks

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Abstract— Facial expression recognition is one of the pillars providing great support and convenience in the fields of Artificial intelligence, gaming, marketing and healthcare. Emotions are an effective communication tool and the way humans communicate their feelings is via their facial expressions. Identification of facial expressions is a critical and challenging process in social interactions. Detection of facial emotions may be used in conjunction with other systems to provide a level of protection. ATM may be set up in a way that they will not dispense money in case the

consumer is afraid. It can also help the blind person to know the expressions and emotions of a person standing in front of him. It can also help to identify depressed people via social media. This can be used in games to assess strong and weak points of the player and can be distinguished by analysing their expressions at various points of the game. The technique of feature extraction is used to mask the most appropriate areas of the face.

House Price Prediction Using Statistics with Machine Learning

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Abstract**—**Early, the price of house was estimated by sellers. However, the real estate valuation process depends on many factors such as location, house type, size, parking, and facilities that affect the prices. Ask buyers to explain their dream house, and probability will not begin with the basement ceiling or the proximity to facilities of personal benefit. This project focuses on house pricing using the machine learning algorithms to predict house prices. In this paper, we are predicting the sales price of houses using statistics tests and machine learning algorithms. House prices are determined by many features such as area, Utilities, house style, location, age, grade living area, number of bedrooms, garage and so on. LASSO has helped in feature selection for XGBoost. From the results gained, XGBoost has high accuracy. RMSE and R2 are used to evaluate models.

Predicting Revolving Credit Balance – A Machine Learning Approach

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Abstract**—** The aim of this paper is to predict the best possible revolving credit balance by detecting spending and balance paid on time using various Regression methods, a machine learning technique. The credit data available is raw data that would go through multiple steps such as exploratory data processing and data visualization to become a proper data. This data collection was downloaded from the GitHub website. The data set has 887379 rows and 36 columns. This data collection comprises numerical, categorical, and missing values. A guided learning methodology would be used in this machine learning approach. The use of the Regression model is expected. Rstudio was used to develop this idea, and Rshiny was used to build the dashboard. In this paper, we use linear regression, specifically Lasso and Ridge, which are two types of linear regression approaches. In this paper, the Lasso Regression model yields the lowest RMSE value possible. Then we use the model to measure the revolving credit balance.

Data Mining & Artificial Intelligence-II

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Advance Vehicle And Driver Profile Management Using Cloud Frameworks

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Abstract—Advancements in semiconductor technology, embedded automotive computing artificial intelligence, machine learning and cloud computing has recently helped automotive industry to reach next generation vehicular experience such as self-driving cars, enhanced safety features, cloud-based fleet management, highly efficient automotive manufacturing, connected cars, telematics and many more. Automotive or vehicular industry has reached to a stage where it provides better driving experience, in vehicle connectivity and entertainment and remote vehicle diagnostics and assistant, etc. Automotive cloud computing is one such domain which helped automotive industry to scale itself to connect the vehicles to cloud and remotely manage and control the vehicles, provide emergency assistance, provide data science and analytics support for dealers, insurance companies, car manufacturers, fleet management, etc. In this paper we present the research of recent advancements of automotive industry especially using cloud computing and how the cloud computing frameworks are making huge impact on auto industry such as advance driver's profiles management using cloud framework. This paper also discussed the advancements in the vehicle and driver's preference management electronically using for their next generation electric and hybrid vehicles. And the paper proposes the smartphone's NFC or BLE based driver's profiles management approach.

Lifecycle of KPIs in Cloud Networks

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***Abstract*—** Key Performance Indicators are the benchmarks for measuring the health of a given network like Performance, Availability and Resiliency, etc. The Virtualization and Cloud computing transformed how the network operates and delivers services. This led to a new paradigm shift in how we measure the KPIs of Cloud Networks. The KPI management is a big challenge for cloud service providers. This paper describes KPI management for Cloud Networks through the Lifecycle of KPI. The KPI Lifecycle contains the systematic procedure for KPI Identification, Monitoring, Storage, Visualization and Analysis.

Fortification For Cloud Data Pilfering Using Attribute - Based Encryption

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***Abstract*—** Cloud Storage provides the information owner to host endemic information into the cloud that can

be accessed by the cloud users. There are many benefits to use cloud storage namely for substantial readiness, substantial authenticity, fleeting implementation, and durability. Since the cloud depository is steered by the Cloud Service Providers(CSP), thetraditionalmethodslikeClient/Servermock-upsarenot satisfactory for the cloud depository. So many IT industries use the CP-ABE, Cypher-Policy Text Attribute based Encryption technique to bring forth the certainty to the information stored in the cloud depository. But in this technique, the authority is centralized i.e., Single-Authority Access Control. Single-authority access control is used to generate unique and undisclosed keys for permissibility verified users that makes the users to wait for an epoch, to get their undisclosed keys to access the data from the cloud. To overcome this problem, so as to achieve surge the coherence of the system we are proposing decentralized technique i.e., Multi-Authority Access control system using ABE, Attribute Based Encryption.

IOT Security Redefined: A Novel Towfish Algorithm Implemented In Cloud Service For A Smart Energy Meter

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***Abstract*—**The amount of data collected through the internet and other sensing devices are growing in exponential range. In order to satisfy the need to handle the data over the internet for consistent performance of device a security algorithm plays a major role. Communication level IoT security will be addressed through symmetric key cryptography technique. This paper is divided into 2 parts where part one comprises of novel Towfish Algorithm where time constraint will be handled in the most efficient way (reducing delay) to encrypt 16 bytes of data over the internet and part two comprises of analysing the energy consumption using energy meter configured over RPi (Raspberry Pi) board integrating Novel Twofish algorithm to extract the amount of power consumed by certain set of devices there by pushing into cloud for data analysis (cloud service using Thingspeak and firebase API's).

Fundalmentals Of Cloud Computing Using Microsoft Azure Portal

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***Abstract*—**Cloud computing having the aim of offering an active platform and an infrastructure, which is cost efficient and scalable in terms of cost for their customers, and it provides everything as a service. Cloud services are quite abstract with several solutions available according to user requirements, on the market of Cloud computing and a set of well-defined characteristics. In this project we have worked on the cloud platform to understand it's features and the services it has provided. We have used many services like blob storage, disks, virtual machines etc.

Analysis Of Distribution Transformer Physiological And Electrical Fault Detection - A Smart Grid Application

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***Abstract*—**Power, from the point of generation to the consumer end is reached by means of power grids. Conversion of power from HV to LV and vice versa happens in the grids or more commonly called as substations. These substations/power grids may be accessible or located in a remote location. Transformers are the essential part of the transmission and distribution network in the power grid. Monitoring and maintaining of the grid is basically very monotonous process. Under such circumstances monitoring the health of the transformers to ensure an uninterrupted power supply to the consumers is challenging. Monitoring involves various parameters such as over voltage, load currents,oil temperature and transformer oil level etc. In this article, the distribution transformer state is evaluated using real time data from the transformer and specific sensors via Raspberry pi & Artificial neural networks, A model has been proposed for continuous monitoring consistent vigilance & swift actions against any faulty situations.

CloudNative Microservice Architectural Pattern

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Abstract— Cloud Computing and Virtualization transform the way software applications designed, developed, and deployed. The underlying basic computing resources Compute, Memory, Storage & Networking are abstracted and virtualized. This led to faster deployment, commissioning in a controlled environment, reduces operational cost, and introduced billing type pay-for-use. Microservices is one of the well-known software architecture patterns based on Service-Oriented-Architecture. In Microservice software architecture, the application business logic is comprised of several Microservices. Each Microservice has distinct responsibility which can be developed and deployed independent of other Microservices. Microservices easy to scale, provides control to scale required Microservices only.Applications based on Microservices software architecture deployed in high computing servers in pre-cloud computing usage. Due to the inherent nature of virtualization in cloud computing, it has become very prominent and common to develop microservice-based applications.Microservice applications deployed in various cloud platforms like AWS, GKE, Azure. Kubernetes is an open-source container-orchestration system for automating software application deployment, scaling, and management.This paper discusses the architectural view of cloud-native microservices deployments.

Cloud Based Student Repository System

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Abstract—Learning through research brings better outcome. In this project, our main motive is to provide a flexible web developed OPAC (Online Public Access Catalogue) for users to gain allusion of projects which is already being exist in the Catalogue. For a developer learning with references helps to design desired outcome for that we are providing a complete erudition of the enduring project by the organization through OPAC. The users are able to upload the video and documents related to the project and also can scrutinize the existed projects. For that different framework are used such as python flask, Azure cloud, Collaborative Filtering etc. These frameworks are able to store and provide better methodology of learning. Therefore, this paper aim-at providing simple interface for gathering information regarding designing of projects.

Mobile Computing and Cloud Computing

IACIT-2021-PID-523
IACIT-2021-PID-526
IACIT-2021-PID-528
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IACIT-2021-PID-542

A CNN-Based Security System Forcontainmentof Covid-19 And Other Viral Outbreaks

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***Abstract*—**The novel Coronavirus has been taxing so far and has affected a lot of people; students with their education, labour with their daily wages, lower-middle and lower-class people with their income, etc. The virus has damaged the economies of various countries, with third world countries suffering the most; to have reached a point where lockdown is not feasible anymore. Based on the precedents set by WHO, this paper aims to devise a deployable method to ensure safety norms in various premises such as professional campuses and universities, which would ease physical work and presence in the said premises by keeping a check on corona outbreak. This paper provides a simple standalone security solution that can be deployed irrespective of region, making it advantageous over other existing solutions. The solution proposes to take users through a seamless three-staged process to ensure security from COVID-19 in the associated premises.

Detecting Parkinson's Disease Using CNN- A Deep Learning Approach

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***Abstract* -**These days, a fundamental assessment sort in clinical affiliations biometrics is finding careful biomarkers that award settling on clinical choice assistance instruments. Parkinson's contamination (PD) is a tireless and reformist illness that impacts a colossal number of people all throughout the planet. Regardless of the way that it is exceptionally easy to remember someone affected by PD when the illness shows itself (for instance shudders, progressiveness of improvement and freezing-of-step), most works have focused in analyzing the working arrangement of the ailment in its starting stages. In such cases, prescriptions can be coordinated to grow the individual fulfillment of the patients. Since the beginning, it is outstanding that PD patients feature the micrography, which is related to muscle resoluteness and tremors. In that limit, most tests to distinguish Parkinson's Disease use physically composed assessment, where the individual is drawn nearer to play out some predefined tasks, for instance, drawing twisting and meanders on a format paper. Subsequently, an expert examination the drawings to describe the reformist of the disease. In this work, we are interested in assisting specialists with such tasks by developing AI systems that can take real data from tests and suggest a possibility of a given person being impaired by PD based on their physically composed capacities.

A Machine Learning Approach For Tomato Crop Yield And Price Prediction

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***Abstract*—**Agricultural product costs play a significant part in the horticultural market. In India, vegetables, for example, tomatoes have the biggest supply and price variances among farming items. As tomatoes are grown around the year, outdoor and indoor, their yields change because of various factors, it is hard to settle tomatoes' inventory and costs. Although the Government puts numerous efforts to balance out the supply and costs of vegetables, continuous meteorological changes have prompted unstable supply and price fluctuations of vegetables. Accordingly, the right anticipating of vegetable costs is a significant issue. To oblige these, in this paper, an attempt has been made to dissect the costs and yield of tomatoes in India by utilizing a Machine Learning approach. This will unquestionably help the farmers and the Government if the anticipated costs are getting higher in the forthcoming months, then appropriate strategies can be made to diminish the costs of tomatoes.

OCARD: Object Classification of Automotive Radar Data Using Convolutional Neural Networks

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***Abstract*—** Sensors in the automotive domain are mainly divided into camera, radar and more recently, lidar. These sensors have shown great potential in driver assistance applications. Although camera feed is more understandable to human perception, it fails to be useful when the light and weather conditions are bad such as night-time, rain, fog, snow etc. It becomes difficult to identify and classify objects with the said data. This paper proposes a novel technique to classify road objects using radar data using a deep learning method called Convolutional Neural Networks. Past researches have shown classification of traffic elements using the radar spectrum or low level radar data. Here we use a processed form of radar data. Since CNN's need to have images as an input, we propose to pre-process the radar detections and convert it into an image form to be then classified into categories like car, truck, pedestrian or cyclist. The results demonstrate that the novel method shows close to state-of-the-art accuracy for classification. The paper shows that deep learning methods greatly impact the classification accuracies using radar sensors.

Comparisons On Logistics Regressions, Random Forest, and CNN for Handwritten Digit Recognition

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***Abstract*—**The technology of handwritten digit and character recognition is the process of identifying handwritten numbers using computers or other devices, machine train itself to recognize the handwritten digits or characters from various sources like bank cheque, mails, images, etc. and some real-world scenarios like recognizing number plate of vehicles. This paper is about CNN, Logistic Regression, and Random Forest algorithm with their application in handwritten digit or character recognition system, the system works on MNIST dataset for training and testing the models, to get the best accuracy this work rewrites CNN, Logistic Regression, and Random Forest with python libraries. Finally, these algorithms are analyzed by comparing the accuracy and recognition duration.

Facial Emotions And Behavior Monitoringsystem Using DNN

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***Abstract*—**In this paper, Machine Learning Algorithmsareused to implement the proposed approach to identify social distance, face masks, drowsiness detection, age-gender detection, and emotion detection. While dealing with social distancing initially, we need to detect humans faceswhich areavailableby using COCO (Common Objects in Context) datasets and later on polygon-shaped ROI (Rectangular-region of Interest) is warped with a rectangle which helps to find the distance from each centroid (person). Similarly, we predict the face-mask, age-gender, emotion, and drowsiness altogether using frontal-face detection and eye-detection via haarcascade dataset loaded into Convolutional Neural Network (CNN) to train and test the models on color mapped images. In the proposed model,we are using Linear discriminant Analysis (LDA), Independent Component Analysis (ICA), K-Nearest Neighbors (KNN), and Support Vector Machine (SVM) machine learning techniques.The accuracy of proposed system depends on frame (i.e., 88.2%, 89.7%, 95.1% and 98.3% in 0~0.2s, 0.2~0.6s, 0.6~1s, >1s time windows respectively). The accuracy even depends

upon the distance away from the camera (i.e., 60.4%, 73.9%, 89.3%, 95.2%, and 62.2% in >15, 15~10, 10~6, 6~0.5, <0.5 meters respectively). The resultant average accuracy of all the models is 96.3% which is capable to predict various tasks as said above. This complete model is made accessible to users via a standalone software/Desktop GUI. The proposed approach is promising for performing all the tasks and activities more accurately and efficiently.

A Novel Method for Fruit Detection and Calorie Estimation using CNN

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Abstract— Dietary food consumption has become significant these days as the patients need to deal with food admission without fail. Picture-based organic product calorie assessment is critical to different versatile applications for recording ordinary feast. In any case, some of them would need manual support for calories assessment, and regardless of whether it is computerized, organic product classifications are frequently restricted or pictures from numerous perspectives are required. It isn't yet accomplished to gauge organic product calorie with functional precision and assessing natural product calories from an organic product photograph is a perplexing issue. Along these lines, in this paper, we propose assessing natural product calorie from an organic product photograph by synchronous learning of organic product pictures and calories utilizing profound learning. We present a framework which can perceive the organic product picture, and afterward foresee its dietary substance, like calories. We present CNN-based ways to deal with these issues, with promising primer outcomes.

Voice Based E-mail System For Blind People Using Machine Learning

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***Abstract*—** nowadays, the Internet is well-known for providing people with a wide range of services in a variety of fields. It is a very versatile tool that can assist you in completing many tasks quickly and easily with a few clicks. Email, for the most part, is a convenient way to interact with individuals or small groups of friends or coworkers. It allows users to send and receive documents, photos, links, and other files quickly and easily. Furthermore, it gives users the freedom to communicate with others on their own timetable. When it comes to using the Internet, people with different abilities face a variety of difficulties. People with visual impairments may face difficulties because Web content is incompatible with the screen reader they use, which is a software application that provides computer-synthesized speech output of items on the screen as well as equivalent text provided in the back-end code. But when designers fail to use acceptable text tags on connections, graphics, tables, or shapes, screen readers have problems. In this sense, we have suggested a voice-based e-mail system using machine learning that will undoubtedly assist them in comfortably communicating over e-mails on their own.

Digital Image Processing & Sentiment Analysis-I

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IACIT-2021-PID-774

Tomato Grading: A New Approach For Classifying And Predicting Tomato Quality Based On Visual Features

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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 3.8% over the projection horizon of 2021-2026. The planned approach that calculates the grade of the tomato in regard to its external features. Grading is sorting or categorization of tomatoes into different grades according to the size, shape, colour etc and is one of the foremost necessary processes in post harvesting, however this procedure is sometimes administered manually, that is not economical as a result it needs huge estimate of enrollment, and have an inclination to human error. The grading method is performed by capturing the tomato image using web camera which calculates the percentage of ripeness based on unique set of features that are utilized to train the neural network. Color emerges as an extremely prominent feature for recognizing defect and matureness of the tomato. The major objective is to check the tomato quality with high speed for evaluating maximal count of tomatoes in least amount of time. For spoiled tomatoes, the proposed system helps in identification of tomato plant disease and allocate countermeasures that can be used as a fortification mechanism against the disease. The tomato plant disease detection can be done by observing the spots on the leaves of the diseased plant. In order to detect plant diseases, the approach we are endorsing is image processing using Convolution neural network(CNN).

Image Processing Technique For Authentication of Indian Paper Currency

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***Abstract*—**As we all know day by day the technology is getting better and better, the production of counterfeit currency has been rapidly increasing. The counterfeit currency problem is faced by almost all countries. Since the real economy is affected, it has affected the economy of the country. Even when the drastic step of demonetization was taken in 2016 to overcome counterfeit currency, this problem did not end. The only one solution for this problem for a common man is to detect the fake currency, by using the fake currency detector machine. These machines are used in banks and large scale business, but for a small business or for a common man these machines are not affordable. There is lot of researches taking place on this matter by using deep learning, image processing, and machine learning techniques. This paper gives the complete methodology of fake note detector machine, which is affordable even for a common man. By implementing the applications of image processing techniques we can find out whether the currency notes are fake or not. Image processing technique consists of a number of operations that can be performed on an image, some of which include image segmentation, edge detection, gray scale conversion, pre-processing etc. The proposed system will detect the counter feit currency of new denominations by distinguishing each denomination based on its size and depending on the features of each currency the comparison takes place. Based on the features matched, it detects whether the currency is counterfeit or not. The systems have advantages like simplicity, reliability and cost less. Which is affordable by a common man since the common man is the one who will be effected most, when the counterfeit currency are circulated in the market the common man has to pay the real value of that currency.

Horticulture Crop Inventory Classification Using Satellite Image Processing

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***Abstract*—**Identification of horticulture crop type is as important and classification of crops, it shall be used for crop yield measurement and planning of plantation. It is also important to obtain an accurate classification of crops to help ARO's report outcomes to the authorized representatives in the respective department. It mainly focuses on crop identification in certain areas and hence it is important not only to classify the crop but also to detect the type and grade based on the satellite imagery and ground data. The dataset used is composed of the local region and appropriate channel images from the satellite.The analysis identifies the techniques of Machine Learning methods that will classify the type of horticulture crop, Deep Learning methods are used to diagnose grades for the crop in a particular region/area that helps the farmers and agriculturists. Neural Network algorithms have been successfully used to identify the crop and grade the crop with very little variation. In this paper, it is proposed to provide a detailed survey on technologies for horticulture crop inventory to improve the accuracy of crop classification.

3D Image Construction Using Stereo Corresponding Point-Based Technique

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Abstract— 3D reconstruction is a method of creating a three-dimensional model from a collection of basic images or 2D images. It can in simple words be stated as the reverse process of obtaining 2dimensional images from 3D scenes. Thus, capturing the essence of an image intact without losing or foreseeing any given minute detail of an image. The 3D concept is extremely important, in today's studies an accurate structural measurement and depiction of an image is required in various fields. In this paper after research and analysis of various methods to convert an image from 2D TO 3D, based on various metrics we have used stereo corresponding point-based technique. These methods are implemented on the stereo corresponding points identified manually in multiple images. Thus, the name SCP (stereo corresponding point) method.

Data Pre-processing Issues in Medical Data Classification

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[IACIT-2021-PID-741]

Abstract –With digitalization of data and the rise of World Wide Web, access to information has been very easy and affordable. Especially the Web and the Internet have boosted research activities by facilitating access to large, publicly available medical datasets under open access scheme. These developments have resulted in explosive amounts of data being generated varying in volume, variety and velocity thus referred to as big data. Availability of such medical big data has catalyzed the research in medical predictive analytics. However, the true value of such data can be derived only after subjecting it to careful processing and analysis before drawing inferences from it. Publicly available medical datasets have noise in the form of missing values, outliers and data inconsistencies, that may affect the results or outcomes negatively. Pre-processing of such data is essential to eliminate noisy elements and refine the data to be suitable for further,r analysis and processing. This paper signifies the need for data pre-processing and explains the data pre-processing pipeline with various underlying stages constituting it. It also presents a comparative analysis of various data pre-processing techniques for handling missing values and outliers in a dataset.

Employee Surveillance System Using Face Recognition

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[IACIT-2021-PID-743]

Abstract**—**Advancement in technology has made face recognition system more prevalent and convenient to identify a person without a manual system which contributes to time consumption. In this system, the monitoring of employees is carried out using the facial recognition system. Our project addresses the problems therein with manual surveillance by automating it in an extremely efficient manner. Machine learning and deep learning have benefited people from all walks of life, and we plan to use machine learning in our surveillance system to build this specific project with the aid of Python and its comprehensive modules. The project involves a real-time detection of faces which are then matched with the corresponding face in the database and the corresponding time at which the login has taken place is stored in an excel sheet. To achieve the goals, we used a combination of machine learning techniques and various logic-based algorithms.

Review on Existing Methods of Fire detection and Extinguisher System using Image Processing

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[IACIT-2021-PID-774]

Abstract- In today's world, in any building, it is compulsory to have an extinguisher. Yet there is uncertainty and turmoil over either vacating the area or turning on the extinguisher and extinguishing the fire when there is a fire breakout. Early detection of fire is necessary to prevent the further loss of life and property. The existing systems for detecting and extinguishing a fire are the smoke sensor and sprinkler type systems that detect fire from smoke and are programmed to activate after reaching the threshold set temperature. All things considered, with this sort of framework, there are numerous disservices like a bogus caution, space inclusion, signal transmission, and the postponement in an alarm. In this paper, an extensive comparative analysis is made on the existing literature. Also, a model for fire detection and extinguishing using image processing and machine learning is proposed. This technology can be used to monitor high-risk zones where there is always the possibility of a fire. The significance of this paper is to feature a dependable, safe, and shrewd framework to lessen restrictions and deficiencies like false alarms, which cause panic among individuals and the deficiency of money with the utilization of different advances and make the spot protected from the perilous fire.

Digital Image Processing & Medical Diagnosis-II

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IACIT-2021-PID-739

Fatigue Detection for Drivers Using Face Object Features Based On Aspect Ratio of Eyes and Mouth

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***Abstract*—** Nowadays, an ever increasing number of callings require long haul fixation. Drivers must keep a top to bottom eye out and about, all together that they can respond to abrupt occasions right away. Driver weariness regularly turns into a prompt clarification for some auto collisions. There is a necessity to build up the framework which will recognize and advise a driver of his terrible psychophysical condition, which could altogether diminish the measure of exhaustion related auto collisions. Notwithstanding, the occasion of such frameworks experiences numerous troubles related with quick and legitimate acknowledgment of a driver's exhaustion manifestations. One among the specialized prospects to execute driver sleepiness identification frameworks is to utilize vision methodology based. The content present right now utilized driver sluggishness recognition frameworks. Here we are identifying the main impetus sluggishness by assessing vision arrangement of him. The venture manages programmed identification of driver sleepiness. Recognizing the driver's tiredness in the driver's seat at that point cautioning him may lessen street mishaps. Languor during this case is caught utilizing an auto camera, whereby, upheld the caught picture, perceives eye proportion whether the main thrust is alert or tired.

Detection of drowsiness to ensure safety while driving

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***Abstract*—**This In current eons driver lassitude is foremost root of automobile accidents across the world. A straight approach of evaluating driver lassitude is calculating the physical condition of driver i.e. tiredness. That's why it's essential to spot the tiredness of all the driver to save their life and belongings. So, the scheme of this project is directly targeted on the way to emergent a pattern of tiredness recognition device. This device is a tangible time device which takes photo endlessly and processes the position of an eye permitting to the identified procedure and provides caution if mandatory. According to the research there are countless approaches for driver drowsiness detection but this methodology is fully non-intrusive for transportation security which does not touch the driver in at all, hence philanthropic the rigorous state of the driver. In lieu of recognition of sleepiness the each closing rate of eye is deliberated. So once the closing of eye surpasses a definite quantity then the car user is acknowledged to be drowsy.

Driver drowsiness detection is a carriage security machinery which avoids chances of accidents when the car user is attainment lethargic. Countless researches have advised that all over the place 20% of all lane fortunes are interrelated to lassitude, up to 50% going on firm infrastructures. Driver lassitude is a significant aspect in an enormous numeral of lorry misfortunes. Current figures guesstimate that yearly 1,200 deaths and also 76,000 injuries can ascribed to lassitude allied clatters.

Food Taste Analysis Based on Facial Expression Detection

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***Abstract*—**Taste tasting is a critical metrics for a variety of purposes, including predicting long-term market acceptance of a variety of food and beverage products. The main purpose is to use speech, power such as speed and speed of speech to express the secret patterns of tasteful responses. To that end, we've compiled a huge database of tasting food. The database contains a collection of video samples of flavoured discourses collected from various topics. This extensive test on websites including OpenCV image processing, deep learning algorithm-CNN editing and GUI skinter, this helps to separate between different levels of taste preferences. This project aims to independently estimate your preferred taste using idiomatic illustrations, based on visual, informal, and varied sources.

Coastline and River Banks Erosion prediction using Image processing

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Abstract— In recent years the people are aware of the threat posed by river banks and coastal erosion. In several parts of the world, national and local governments are planning strategic management strategies in response. A thorough knowledge of coastal processes is an essential component of the planning process. Coastline erosion prediction is a process of estimating the future coastline and river banks. In order to handle the danger of 33 coastal settlements in India, it is critical to consider and forecast large-scale, longer-term coastal changes. By 2100, the ecstatic sea level increase due to global warming is expected to be between 18 and 59 cm, necessitating the identification and defencing of vulnerable coastal areas. Research has been conducted for identification of coastal erosions and predicting changes in the coast line but none involves computerized technique for erosion prediction. Hence, we propose an innovative and practical method of predicting the changes in the coastline by using computer tools. The main aim of this project is to predict the coastline erosion efficiently by analyzing the images recorded through google earth. The absorbed images from google earth are feather processed and the transformed images are used for predicting the changes using SSIM tool.

B.E.S.T : Basic Emotion & Sentiment Tracking

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Abstract- The emergence of depression, personality disorders, serious emotional disturbance & social anxiety disorder among children in our modern society is now alarming. Lack of interaction & communication is a major aspect of it. Nowadays, in nuclear family children aren't able to get much of interaction with elders which leaves them most of the time by themselves, this affects their emotional development & expressiveness. So, our primary focus is on development of a system which can be fitted into any preferable or favourite toy which will ease the process of developing a child-toy emotional bond. Later the same will help for tracking of emotion & sentiments as the relation which child develops with the companion toy helps the child to be expressive about his/her thoughts, feelings & day to day events. A subsidiary goal is to improve communication & interaction between child and parents.

Semi Autonomous Vehicle For Pot Hole, Humps And Possible Collision Detection And Avoidance Using Image Processing

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Abstract- The maintenance of the street is one of the significant issues in the developing countries. Identification of potholes and humps not only help drivers to keep away from mishappens but it also it alerts the concerned authorities about the presence of potholes on which required measures should be taken to eliminate it. Accidents due to pothole and hump are a cause of majority of road accidents in India and in many other developing countries. The problems due to potholes increase to a greater extent especially in bad weathers and at night and when driver is new to the road due to lot uncertainities. It is a necessity for people to have well maintained roads to be able to avail a safe travel. Our project reduces accidents that are caused every year due to potholes and sudden interference of animals on the roads. Our aim is to build a vehicle which is capable of identifying potholes humps and movement of humans or animals on the road at a distance and alerting about those to the driver. An HD camera along with an ultrasonic sensor and IR sensor is used for more accuracy in order to provide necessary data from the real world to the car. The semiautonomous vehicle is capable of reaching the given destination safely and intelligently thus avoiding the risk of accident. Many existing algorithms like potholes, humps, lane detection, animals, human detection, traffic signal and sign monitoring are combined together to provide the necessary control to the car.

Real-time Eye Tracking for Password Testimony

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[IACIT-2021-PID-726]

Abstract— Individual recognizable proof numbers (PINs) are broadly utilized for client confirmation and security. Secret key confirmation utilizing PINs expects clients to genuinely enter the PIN, which could be powerless against secret phrase breaking by means of shoulder surfing or warm following. PIN confirmations with hands-off look based PIN passage strategies, then again, abandon no actual impressions and subsequently offer a safer secret key section choice. Look based verification alludes to discovering the eye area across successive picture edges, and following eye community over the long run. This paper presents a constant application for look based PIN passage, and eye discovery and following for PIN recognizable proof utilizing a shrewd camera.

Recognition of car number plate using Computer Vision technique

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[IACIT-2021-PID-739]

Abstract— Traffic control and vehicle owner identification has become major problem in every country. Sometimes it becomes difficult to identify vehicle owner who violates traffic rules and drives too fast. Therefore, it is not possible to catch and punish those kinds of people because the traffic personal might not be able to retrieve vehicle number from the moving vehicle because of the speed of the vehicle. Therefore, there is a need to develop Vehicle Number Plate Recognition system as a one of the solutions to this problem. This system plays a significant role throughout this busy world, owing to rise in use of vehicles day-by-day. Some of the applications of this software are automatic toll tax collection, unmanned parking slots, safety, and security. The current scenario happening in India is, people, break the rules of the toll and move away which can cause many serious issues like accidents. This system uses efficient algorithms to detect the vehicle number from real-time images.

Natural Language Processing

IACIT-2021-PID-518
IACIT-2021-PID-570
IACIT-2021-PID-594
IACIT-2021-PID-619
IACIT-2021-PID-658
IACIT-2021-PID-688
IACIT-2021-PID-731
IACIT-2021-PID-781
IACIT-2021-PID-805

Design and Implementation of the Simulator for Ricobit

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Abstract**—**Current trends and experimentation outputs have allowed integration over many transistors. To allow this system development ever increasing complications, shared similar structures were taken over by Network onChip(NOC) based topologies. ANOC is a technology that allows data packets of different modules to inter communicate on a system on chip. For this reason, in the earlier stages, a much simpler inefficient, bus architecture was in use which had inept latency and throughput. Similarly, many other topologies such as mesh, torus, etc. were inefficacious in terms of latency and architecture. The configuration of such high-performing models demands an in depth understanding of the way the various modules are internally connected with one another, their internal characteristics, and their working of these systems. This framework is cumbersome and difficult to tabulate via hardware platforms. Hence, to understand this process framework, simulations need to be studied. This paper provides an analysis of the architecture of the novel RiCoBiT topology and assesses it in terms of parameters such packet latency, hop counts, node addressing, interfaces, throughput and latency. These results are tabulated in this paper, which are then used to provide a basis for analysis and comparison with previous architectures**.**

Criticality Of SMS Encryption And Its Importance For Genuine Two-Factor User Authentication

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Abstract**—** SMS is one of the most used modes of communication ever since mankind started utilizing Mobile Phones. It is often a neglected, and a much unknown fact to the mass public, that this essential service is Un-Encrypted. Even during the times when we had almost no advanced technology that is available today, encryption was used. It has been more than 30 years since SMS-based services were first introduced via Pagers, yet the concept of encryption for the same was never implemented – and there seem no initiatives for the same. This paper highlights the importance of why SMS must be encrypted, what different fields of our lives are affected and put at risk because of the same. We also look into the types of encryption available in brief and demonstrate their ease and implementation. This paper hopes to highlight the potential data leaks that might be facilitated due to leaked 2FA and the final aim of this paper is to bring in a change into the current system of SS7 and Unencrypted Messaging. Technology is growing at a faster rate than ever before, and it is crucial to replace outdated technologies with newer technologies that provide more comfort and security.

Password Encryption-Decryption Based Online Voting System Using OTP

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***Abstract*—** In this proposed system we have achieved the benefit of online voting as we all know that internet and gadgets are very good. In this pandemic situation we can prefer Online Voting System instead of offline voting system. By using the Online Voting System, we can avoid the crowd, gathering and to overcome the Covid cases. For Example, nowadays people are not maintaining social distance that can causes more Covid cases. In Order to save the time and life's of the citizens of nation we can prefer Online Voting System project.This paper presents an effort to leverage benefits to achieve an effective scheme for online voting. The election can be conducted in two ways: By Paper Polling form and Mechanized Voting Form. Web-based voting refers to the decisions made by robotized polling forms. The internet casting a ballot framework is profoundly evolved and the web-based surveying framework can be supplanted by precisely and legitimately casting a ballot on the web and prompt outcomes to provide the security implementation. This proposed system is developed for the user-based voting system. The implementation has two main parts: One is the voter section and second is 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 for the voter. The administrator section executes or permits the functions of voter based on the candidate registration, validation of voter ID, authentication and database the result. A One Time Password module is the mainly used for the security implementation. In this research work a password is generated when each user's login to the system. An OTP is sent to his or her registered mobile number which basically consists of random digital numbers and that will be changing over some period of time whenever user login on to perform the operation.

Evaluating the Performance Metrics: Packet Delivery, End to End Delay and Throughput of FSR, AODV and ZRP Using NS2 Simulator

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***Abstract*—** A working principle of Mobile Adhoc Network ("MANET") is not predefined infrastructure network and without any physical connections. Nodes defined in MANET were free to move, independent to each other. Here with the MANET the information were transmitted using different routes to reach the destinations, it provides the reliable and function properly. It proposes the execution evaluation of mobile adhoc network of the proactive protocol namely fisheye state routing, reactive protocol namely adhoc on-demand distance vector and the hybrid protocol namely, zone routing protocol using the network simulator based examination to perceive the behaviour of the network when the number of the node expands. The perceive of these protocols were determined in terms of packet delivery, average throughput and average end-to-end delay. The functioning of the protocols were examined and analyzed based on the performance in different conditions met were executed using Network simulator NS2.

Machine Learning based Detection of Phishing Websites in Chrome

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***Abstract*-** Over the past few years, the Internet has seen tremendous growth within the number and variety of web services. Due to the proximity of the net, users change their preferences from traditional shopping to e-commerce. Instead of robbing banks / shops, these days, criminals try to find their victims online through some means. By using anonymous web formats, attackers unleash new tactics, such as phishing scams, tricking victims into using false websites to collect their sensitive information such as account accounts, usernames, passwords, etc. The method proposed in this paper separates URLs automatically using a Machine-Learning algorithm called logistic regression commonly used for binary classification.

Study of cyberbullying & identifying the challenges in the native language

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Abstract- As India adopts the digital India concept, social media provides content based on native languages. People use native languages to express their opinions and views; however, a single word's meaning could differ from language to language. People use their native languages to express their opinions and views which differ in each case. The Study of cyberbullying in the native language is still a premature field where attention is required. This paper presents detailed information about cyberbullying and its various forms, statistics related to the Indian constituency, how it affects human psychology, and what kind of laws are present for punishment. Different papers, including languages other than English, were reviewed with positive and negative sides. A shared understanding of the need for developing a model concerning machine learning, an essential structure for developing a model for detecting cyberbullying in the native language is felt, and the challenges that occur with the data set have been reviewed.

Design of an Application Suite Using Distributed Computing & Distributed Storage

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Abstract**—**Distributed Computing has been catching the eyes of researchers and enthusiasts lately, because of its ability to handle the increasing workload on systems/machines. Instead of updating a single system again and again to improve workload handling, another system can be added to handle the escalating workload. The agenda behind distributed computing is for a community of computers/systems to work together at the back-end while it appears as one for the end-user. Solitary systems operating together in such groups run at the same time and allow the entire system to continue processing even though one or more of them fails. Distributed computing can be used by researchers and students in the form of an application suite to train their AI and ML models and render graphics. Not all systems/computers out there are qualified to perform high processing tasks such as AI / ML model training or graphics rendering. So instead of spending hundreds and thousands on buying a system with the ability to process heavy tasks, this paper aim to provide a suite that allows neighboring systems to act as nodes and share workloads between available nodes that can distribute tasks among themselves and processes simultaneously without pressing any pockets.

NIDS: An Efficient Network Intrusion Detection Model for Security of Big Data Using Different Machine Learning Classifiers

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[IACIT-2021-PID-781]

Abstract - The security of the big data is one of the important challenges which needs to be addressed by designing an efficient model capable of detecting the intrusions in the network. The model should be able to detect the network packets as either normal or abnormal. The detection of the intrusions in network was already represented by multiple researchers using different algorithms which still needs to be addressed. This paper proposes a binary classification model by using different machine learning classifiers for intrusion detection. The KDD intrusion dataset is used in training the machine for identifying the different intrusions of the network traffic. The machine must be trained efficiently using the different classification algorithms and the security for the data needs to be attained by identifying the invalid network packets. The experimental results demonstrate that the random forest ensemble machine learning classifier is having highest accuracy of 0.2 % when compared with the existing research results in the identification of different intrusions towards the network packets.

The File Encryption Application using AES-CBC MODE

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[IACIT-2021-PID-805]

Abstract— Data transmission over the network is often at risk due to various data security issues. Whenever server holds the data to be accessed by other users, it poses a risk of unauthorized access may occur. There's also the possibility of mishandling the files by the unintended recipient in case of unsecure transmission. In order to resolve the issues in security during file transfer from one person to another person, this paper proposes an application in which user can encrypt large files and protect the contents of file information. Also it prevents files from being intercepted and recipient can decrypt files using password which is generated during encryption process. This application uses Block cipher mode of operation in the Advanced Encryption Standard to encrypt file.

IoT & Wireless Sensor Networks

IACIT-2021-PID-525
IACIT-2021-PID-540
IACIT-2021-PID-560
IACIT-2021-PID-562
IACIT-2021-PID-565
IACIT-2021-PID-572
IACIT-2021-PID-631
IACIT-2021-PID-643
IACIT-2021-PID-657

Android Operated Quad-Bot (IOT)

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***Abstract*—**A quad-bot means a robot having four legs and, in our project, we are trying to implement a robot with four legs which can be controlled using an Android application. It is basically based on IOT. The Arduino Uno board will be the controller of the legs and whenever there is any signal from the android application to the Wi-Fi module or the Bluetooth module, that signal will be passed on to the Arduino and that will control the movement of the quad-bot in a 2D plane. There would be 3 servo motors in each leg that would make it easier for the quad-bot to operate the movements of the legs. If all these would be implemented properly then we would try to install a Bluetooth camera in it to control it from some remote location too. It's just a prototype or a miniature version of quad-bot that's we would love to work in future.

Arduino Based Smart Energy Meter Using IOT

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***Abstract*—**There are numerous issues with existing domestic energy metre reading systems, including difficulty in construction, too narrow bandwidth, too low rate, poor real-time, and slow two-way communication, among other[1]s. This paper uses wireless technology for an Automatic Meter Reading device to solve the problems described above.The proposed approach uses IoT to communicate between the Electricity Board portion and the user section, allowing the customer's electricity usage and bill information to be transmitted [2]. The customer receives information about the bill amount and payment through the Internet of Things.

Smart Arm Drive Along With A Cart-Cum-Tray

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***Abstract*—**Robotics exploits a combination of various electrical, mechanical as well as different methods such as computation, intelligence and development in existing and upcoming new technologies. With the increasing growth of robotics and automation the industries are able to develop various technologies globally. Various robots have been designed to assist human beings for both industrial as well as non-industrial tasks. The goal of the project primarily

focuses on mounting a robotic arm along with a camera and a cart-cum-tray on a four-wheel chassis making it compatible to move in all directions. The arm is controlled via Bluetooth using an android smart phone in order to pick and place objects. The camera is used to capture the videos and images functionally. The cart-cum-tray acts as a storage area on the chassis for storing objects in bulk. The aim of this project is to design a prototype that will help and assist humans in their day to day lives.

An Ergonomic Smart Eye Designed For Reading And Object Detection For Blind People Using IOT

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***Abstract*—** The ability to see is a wonderful blessing. Vision helps people to see and understand their surroundings. Blind people have trouble reading books and detecting objects in front of them.A system with additional functionality is designed to support blind people.It is a visual design composed of a few key components such as a camera, Raspberry Pi, and earphones installed together, as well as additional web-based operating technology intertwined. The image collected and processed with the aid of the camera interfaced to the Raspberry pi/IOT technology is the project's input. As a result, the text and objects are detected, and audio information is sent to the blind man through earphones.

IOT Based Home Automation Using Raspberry Pi

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Abstract: In this project we are going to deal with the surveillance and security system using raspberry pi. We are usingVGG face algorithm to process and extract the features in the image that help for facial recognition. We also make use of different type of sensors for creating a security system that will send alerts to the email.

An Implementation of Polyglot Voice Supervise Home Device Using Raspberry Pi

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***Abstract*—**Most of us tend to enjoy the ease of living by doing the bare minimum. The same applies while operating the devices at home by just a few touches or by using our voice in the preferred language. A smart home is an IoT platform that uses the internet to control the devices at our home, and this technology has grown enormously over the past few years encouraging new ideas. And with that thought, this system will be implementing Home Automation with Raspberry Pi and Google Assistant by controlling the appliances like lights, fans, air conditioners, temperature sensors, and more, in any preferred language. Platforms like IFTTT, Adafruit, MQTT, and Raspberry Pi IO are used to connect the hardware with the software that is a common path for devices that are connected to the Relay module and the Google Assistant. The IFTTT platforms are easily available on our smartphones or a website that makes it easy for us to access different devices at different parts of the house or anywhere. Home automation minimizes the manual switching ON/OFF of the appliances whilst being controlled by the commands that are given by the users. This project builds an automation system that uses the range of Wifi or Bluetooth, which is easily accessible by the users to connect their devices and control them by voice through Google Assistant. This makes it easy for the users to access their devices wherever they are. Home automation comes as an advantage for older people and especially the physically disabled. The main objective of this proposed project is to provide a comfortable and a digitalized environment to use the day-to-day appliances with added security.

Farming Copter

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***Abstract*—**Indian agriculture required introduction and insurance substances to accomplish high Productivity. Horticulture compost and substance each every now and then predicted to murder bugs and improvement of harvests.

The WHO (World Health orgqanisation) gauges there are extra than 1 million pesticide instances in always. In that more than one lakh passing's in each year, in particular in growing countries because of the pesticides splashed through character. The pesticide affects the sensory machine of humans and moreover activates difficulty in body. A far flung-controlled hexacopter is applied to splash the pesticide just as manure to hold a strategic distance from the people from pesticide poison. The hexacopter UAV is worked by way of manual flight plans and the sprayer is physically activated. The vertical take-off and touchdown hexacopter is utilised to splash the low quantity pesticide in a bit area. Our task portrays the advancement of hexacopter UAV and the sprayer module.

Iot & Ml Based Smart Irrigation System For Water Pump Controll And Notification Alert Using Raspberry Pi

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[IACIT-2020-PID-643]

***Abstract*—**Agriculture plays an important role in the development of country. For managing the water wastage in the farmland a superior Irrigation system has been proposed to automate the irrigation system and minimize the wastage of water in farmland. The system mainly monitors and control the water pump primarily based on the behavior of soil moisture, air humidity and air temperature and see how it contributes to consider and evaluate the wishes of water to the farmland. The system uses machine learning to compare real values obtained from sensors that has been fed to the machine learning for analysis. The result decides whether Water Pump should on/off based on the soil condition .The farmer receives a message to his mobile through which farmer can check status of the Water Pump(on/off).In irrigation system monitoring soil of land, temperature and humidity of environment, light intensity, rain, level of water tank and everything it will be display on LCD. Depends on soil data using AI/ML algorithm we will predict whether soil is dry or wet and hence we are controlling DC motor. The highlighting features of this project monitoring all data from the cloud using AI/ML algorithms for accurate output.

Autonomus fire exhausting Robot

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Abstract: A fire may start in a factory or in a remote location for a variety of reasons. Electric leaks, for example, can cause significant damage in cotton mills, fabrics, and fuel storage facilities. It's also a worst-case scenario, with significant financial losses as well as devastation in the surrounding environment. Robotics is a new way to protect people's lives, property, and environment. The aim of this project is to create an embedded system-based FIRE DETECTOR AND EXTINGUISHER ROBOT. It will be developed and constructed a robot that can combat a virtual house fire. It must be able to traverse a simulated floor plan autonomously while constantly searching for a flame. In normal circumstances, the robot may also serve as a route guider and a fire extinguisher.
Robots programmed to locate a fire before it spreads out of control may one day collaborate with firefighters to significantly reduce the risk of injury to victims. The project would foster interest and creativity in robotics while working toward a realistic and attainable solution to save lives and reduce the risk of property harm. It also sent alert to thing speak.

Big Data Analytics

IACIT-2021-PID-531
IACIT-2021-PID-596
IACIT-2021-PID-610
IACIT-2021-PID-650

Big Market Sales Forecasting Using Categorial Boosting Algorithm

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***Abstract*—** Generating forecast is without doubt one of the most important zones in any industry. Consumer-oriented merchandise face undetermined demands, insufficiency of historical data and brief life cycles, these elements challenge the forecasting methods to produce precise result. In this paper, the instance of Big Mart has been discussed to predict the sales of different items and for understanding the effects of different factors which effect the item's sales. We performed the statistical analysis on the dataset using statistical tool "SPSS". Predictive model is built using CatBoost which is applied for sales prediction. The proposed model achieved high level of accuracy as compared to other machine learning algorithms.

Truth Discovery In Social Media Big Data

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***Abstract*—** Within the span of enormous information and the coming of numerous advancements in the communication technologies, at every tick of the clock, enormous sums of information is produced from different sources. One such source of data generation is social media. However, such data carries much of the noisy, uncertain, and untrustworthy data. In this way, finding independable information from loud information is one of the characteristic challenges of huge information focusing on the esteem characteristic of enormous information. Therefore, in this article, an attempt is made to target a few challenges arriving from "misinformation spread", "data sparsity" or the "long-tail wonder" in the domain of social media data analytics. The study uses an instance from the Online Social Network (OSN) datasets to develop scalable to wide-range social sensing by consolidating Scalable Robust Trust Discovery (SRTD) plot to address the mentioned challenges utilizing the distributed parallel computing framework. The dataset picked for investigation includes 128,483 tweets which incorporates 20% deception, 80% retweet bringing about 0.05 milliseconds utilizing Spark parallel processing.

Big Data Enabled E- Learning Recommender(BEER)

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***Abstract*—**The current educational systems are well equipped with many of the advanced e-learning technologies to benefit learners and to keep them competent enough as well. The advent of advanced technologies with global access to the Internet has further empowered the educational systems to adapt e-learning paradigms, and thereby keep up with all the benefits of advanced education intact. However, the abundance of available alternatives to the learners makes it a chaos to a learner while choosing the right course/subject based on his learning curves defined with his/her learning attributes. Therefore, in this research paper, to help a learner in choosing the right course based on his/her learning curve, an e-learning recommendation system using big data approach is developed. The method develops a framework deploying machine learning pipelines employed with a collaborative-based filtering algorithm (Alternating Least Square (ALS)) to recommend a course to the user based on the course enrollment data of the user. The performance of algorithms developed are evaluated based on significant evaluation metrics delivering 98% of overall accuracy approximately.

SMART WAREHOUSE AND INVENTORY MANAGEMENT SYSTEM

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[IACIT-2020-PID-650]

Abstract— In general, warehouses are places where goods and products are stored. But the process of managing and locating goods in warehouses is difficult and moreover time consuming, this is because the user has to search the rooms manually and the allocate new places in the room when the goods arrive this requires a lot of effort. This process can be made more efficient using IOT. The warehouse management system uses sensors and QR codes to make this process more efficient. The goods are identified using QR codes and scanners and then can be allocated to various locations in the warehouse. This warehouse management project is based on the architecture of the internet of things which can be developed to track the products along with the product information. In this system a raspberry pi is used as a central server that monitors all information of the goods and using SQL the database is managed so that the user can track the arrival and discharge of the products and goods. This system is developed in a manner where it can be used with any existing warehouse inventory.

High Performance Computing and Networks

IACIT-2021-PID-541
IACIT-2021-PID-567
IACIT-2021-PID-575
IACIT-2021-PID-580
IACIT-2021-PID-607
IACIT-2021-PID-638
IACIT-2021-PID-761
IACIT-2021-PID-767
IACIT-2021-PID-794

NILES: The Next-Gen Employee Chatbot

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***Abstract*—**A Chatbot resembles a computerized device, can be pre-trained, or have self-learning capability. Employee experience is the key. Companies that have considered employee satisfaction and invested in bots have earned more profits when compared to others. The proposed bot could identify the satisfaction of the employees. By applying machine learning algorithms a detailed report of employee experience is created. This helps the company know about their workforce and alter the recruitment rate if required. The popularity of chatbots lets our system be used for a variety of applications. These chatbots are used to automate the meeting schedules, onboarding, and training freshers. Moreover, involving chatbots in organizations strengthens the communication within the organization with more accurate analytics. The proposed system "Niles - the next-generation employee chatbot" can achieve interactive feedback sessions with the employees.

Augmented Reality Based 3D Furniture Shopping

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***Abstract*—** The main aim of the paper is to present an Augmented Reality application for 3D Furniture,with a particular emphasis on the implementation of an Android application that provides a realistic view of an AR 3D furniture target object in the real world using AR technology. This augmented reality app for Android would overlay a virtual environment on top of the user's real world.AR makes real-world data and presents it in an immersive manner, making the virtual section feel like it belongs in the real world. AR is commonly used in online shopping, and the 3D visualisation allows any furniture piece to be configured. As a result, users can customise and combine their favourite furniture products, enhancing their shopping experience.This elevates the shopping experience to a new level. This application allows users to see and experience the furniture object in their current environment before buying it from a shop, and customers can visualise how the furniture model will appear in a real-world setting, reflecting the furniture in one's real world.

Campus Interactive Chatbot for Students

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[IACIT-2021-PID-575]

Abstract– Chatbots are the Bots where user gets the information which he needed from the Bot in natural language without getting help from the third party or a person. Campus interactive chatbot for students project uses artificial Intelligence that analyses the user query and understand the user message later provide a response based on the user query. Students should individually need to go to college if he need any information like courses offered by the college, college timings, admission process, etc. from help desk. This process is timing consuming and requires manpower to provide information to the students. Hence, Interactive chatbots can developed to provide information to the user.

VR game with hand detection for interaction with AR objects

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Abstract— A virtual reality system aims to be more immersive and try to support realistic interactions using physical hand directly, but it is difficult to always match the virtual environment to the physical environment perfectly. In this, we detect hand movements without using any sensor devices and use the data to successfully achieve interaction of the hand with the augmented objects in Virtual Reality. We are going to implement this feature and develop a game in Virtual Reality where the user is enabled to interact with augmented objects. With Augmented reality, games can extend the concept of virtual gaming into the real world to a larger audience and have them experience it while improving their senses.

Augmented Reality Based Restaurant Menu

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***Abstract*—**In this paper, we propose an Augmented Reality-based Android framework that will assist restaurants in providing better service to their customers. It will also provide you with additional features such as restaurant deals, food item ratings, ingredient details, and calorie information, among others. When the application is launched, an augmented category will pop up, you have to select the category you want and the items in that category will be in displayed for you to view. You can now use your android smartphone to find more 3D dishes on your table by swiping. Then you can choose any choice, such as the dish's price, ingredients, and recipe. By assigning a rating to that dish, the consumer may also rate the food and their experience. So whenever a new user visits that restaurant, all details regarding the dish can be viewed. In this application, an user also can find hot dishes and dishes with unusual names that the user doesn't recognise that can be used in a real-life format to solve the majority of the user's problems

Virtual Assistant: B.A.Y.M.A.X.

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***Abstract*—**In this modern age of the twenty-first century, having a virtual assistant is a godsend for all. A software agent known as an intelligent virtual assistant (I.V.A.) or intelligent personal Assistant (I.P.A.) may perform tasks or provide services for a person based on commands or questions. It has paved the way for a new technology in which we can ask machines questions and communicate with intelligent virtual Assistants in the same way that we interact with humans. Digital assistants such as Cortana for Windows and Siri for iOS serve as inspiration for Baymax. It was created to provide a user-friendly interface for completing various tasks using a set of well-defined commands. Users can communicate with the Assistant using either voice commands or a keyboard.

As a personal assistant, Baymax assists the user with everyday tasks such as general human interaction, browsing queries in Google or Yahoo, searching for images, extracting photographs, word meanings, searching for drug details, health advice based on symptoms, and reminding the user about upcoming events and activities. Baymax is also a virtual assistant that can automate your house.

ARFA-QR code based Furniture Assembly using Augmented Reality

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[IACIT-2021-PID-761]

Abstract—The current system of providing 2D instruction set and the products was a less efficient way to guide the user to assemble the product. Hence, the proposed application helps the user with an interactive augmented reality based assembly instruction application. This application is mainly based on furniture models. During the course ofthe project, first, the requirement was noted correctly and understood. Then, the necessary functional, non-functional requirements and use cases were measured. Then the architecture diagrams were drawn. Once, the flow was ready, the implementation was started to build the application.

Assistive Device for Blind, Deaf, and Dumb

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[IACIT-2021-PID-767]

Abstract—Technology and Education have helped a lot of people in their activities to ease their work. Technology has helped people with disabilities replacing their disability with some of the tools which are simple, fast, and cost-effective. The proposed software is highly effective for people with disabilities. A single software that assists people who are blind, deaf and dumb is proposed. The proposed software has a GUI (Graphical User Interface) developed using Microsoft Visual Studio 2019. A blind person can get to know the picture displayed or shown to him. The image processing technique used in the software scans the image and gets the characters from it and displays the same. Further, the displayed characters are converted to speech and are played through speakers. A deaf person who cannot hear the speech can record it and later can be converted to characters by speech processing so that he can understand the speech. A dumb person can type onto the keypad about the things he wants to say. Those typed characters are further converted to speech so that people can listen.
Helping people with disabilities using technology in a single software means a lot of pleasure to disabled persons. Any system with a camera, microphone, keypad, speakers, and display can load this software onto it and help disabled persons in their activities.

Health Care Chatbot Assistant System

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[IACIT-2021-PID-794]

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 embedded along the Rasa stack that incorporates Natural language understanding. It incorporates the sack of words calculation helping in streamlining portrayl 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 likewise 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.

Augmented & Virtual Reality

IACIT-2021-PID-602
IACIT-2021-PID-627
IACIT-2021-PID-672
IACIT-2021-PID-797

Voice Based Email For Visually Impaired

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***Abstract*—**Email, one of the mostly used form of communication in the world.253 million visually challenged people exists worldwide. With the upsurge of technology advancements, lot of messaging applications has had developed. Yet, visually challenged people face a problem of communication. This paper primarily targets to develop a effective medium to the challenges faced by visually impaired which could take speech as text input using Speech to Text(STT) and read the textual content as speech using Text to Speech Synthesizer (TTS).This would be accessible to visually impaired and no longer letting the user to use keyboard and also reduces cognitive load. Also it would be handy for non-blind people. This system is absolutely based on Interactive Voice Response (IVR) making it user friendly.

Real Time Sign Language To Speech Converter

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***Abstract*—**Communications via gestures are languages that use the visual-manual methodology to pass on meaning. Sign languages are communicated through manual explanations in blend with non-manual components. Gesture based communications are undeniable common dialects with their own language and dictionary and Sign languages helps people who are unable to communicate with others verbally. The inspiration driving this endeavor is to contribute seeing gesture based communications nearby modified signal based correspondence affirmation with most limit viability. This paper generally bases on the affirmation of Sign Language, the continuous static movements are assembled from Laptop Webcam. The most troublesome part in the arrangement of a customized correspondence through marking mediator is the arrangement of a respectable classifier that can orchestrate the data static movements with high accuracy. Convolutional Neural Network is used to plan of classifier for gesture based correspondences affirmation, in the proposed system. This framework is built using Convolutional Neural Network for the order of 26 alphabets and one null character sets utilizing 600 pictures for each alphabets.The proposed work is able to accomplish an accuracy of 99.85% for our classifier.The result shows that the model exactness improves as progressively more data is accumulated from various subjects for getting ready.

Text Generation Tool for Writing Assistance using Transformer

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Abstract- Creative writing is a challenge, and everyone faces at some point of time. The struggle of writing with the help of web is really high because of the fact that even though we try, we cannot really bypass the plagiarism. Hence, we created this tool named, Hailey – Text Generation Tool for Writing Assistance using Transformer. It leverages the power of GPT-2 Transformer and generate completion texts conditionally.

Deep Study of Estimation Analysis on Twitter Data

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Abstract- as technology has increased these social media has became vast plat for people to share their views, thought , and twitter has become one the best social media plat form where people are sharing their thoughts ,views and their emotions publically , that's why twitter has become one of the best platform where group of people will share their thought about leader , or a trending news or about politics and religion, education etcthe fast in the number of web user, In today's world has anhugemeasureofdata produce by the inhabitants.This information plays vital role when it comes for selling a product, country's election, differentiating fake news and real news through twitter. Bias detection where we identify the statement Toanalysis these kind ofdata,deep estimation analysisisused.Theaimistofindtheopinion of the people by taking the dataand classifyitaccordingtoitsdivergence,i.e.the tweets will get divided into positive negative and neutral, it will help to know the opinion of the people ,and mentality of the people.

IoT and Healthcare

IACIT-2021-PID-522
IACIT-2021-PID-583
IACIT-2021-PID-664
IACIT-2021-PID-667
IACIT-2021-PID-752

RFID Based Health Monitoring Secure System On IOT

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***Abstract*—**Multi-limit patient screen gets the physiological basic signs ceaselessly screens the patient by utilizing RFID tag of the individual. This frameworks and Internet of Things (IOT) in clinical thought. In this paper, we have arranged an IOT based framework where four cutoffs to be unequivocal heartbeat, temperature, wetness, and ECG are seen utilizing relating sensors. The undertaking seeing flourishing by utilizing RFID names for the specific individual information can be store on IOT. Standard clinical security information is at true danger of divulgence, and many related cases have happened all through the critical length. individual clinical security information can be reasonably leaked to insurance working conditions, which bargains the privacy of people, yet similarly thwarts the sound improvement of the medical industry.In This paper to address clinical affirmation we utilized the RFID progress, proprietor necessities to login to the arrangement and proprietor will bring with or without set data from things talk where suitably all data moved by the stuff and make one record and store it into cloud. since information proprietor can share to another client. client needs to pick and login to the arrangement then they can download data which straightforwardly sent by proprietor.

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, Therefore, Those specialized methods were not commonly used in practice they have problems with how to build a credit score using machine learning algorithm and that indicate the like hood of loan repayment. The purpose of created Credit Scoring Model was to predict good costumer or bad costumer and also reduce credit risk of Microfinance Institution by applying logistic regression algorithm in order to find patterns for recognition of default clients and, thus, support decision making process of credit approval. The proposed method of developing the credit scorecard is expected to lead to successful credit risk management in practice.

Eyes and Voice controlled Wheelchair

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[IACIT-2020-PID-664]

Abstract—Wheel-chairs are essential for elder people and people who are physically disabled. In some cases, person with complete paralysis it may be hard or impossible to use such system. For such people eyes and voice controlled wheelchair can be used. This can be implemented by using voice assistant enabled device which can be used as an input to move wheelchair. Eyes controlled method works based on the movement of eye .Voice controlled works based on the voice commands (forward, backward, left, right, stop)given by user.

Heart Attack Detection And Heart Rate Monitoring Using IOT

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***Abstract*-** This project represents the use of IoT in the health care system. This project introduces wireless heart disease detection and monitoring heart rate. This program contains a specific component. Monitoring the heart rate is a significant factor in maintaining heart health. People from different age groups have different levels of maximium and lower heart rates. We all know that heart disease can kill one life in 3 attempts. Now the days are especially dangerous in the early stages. Taking control of our body means we can protect our health from all other diseases. Our lives are very important and very precious. Nowadays many people lose their precious lives due to a sudden heart attack. A heart attack is caused by diet, age, lack of exercise etc. The heart is not easily accessible. Winning and assisting our community with a heart attack to develop such a system that can help reduce mortality in the early stages. In this case we use or improve the heart rate monitoring and cardiovascular monitoring system using iot (Internet of Things). To achieve the best possible monitoring, connected nerves can be of a type of cord that you know or are attached to where we live. This program monitors patients pulsate, vital saliva saliva. if there is a high parameter that goes beyond the remote price this sensible device notifies doctors or caregivers and triggers corrective measures to save many patients' lives. People face rejection problems and die from various illnesses that are due to a lack of timely medical treatment for patients. The primary goal of developing a systematic patient monitoring system is using IoT. Patient's heart rate or data is monitored and monitored and sent to mobile doctors containing applications. The IoT-based patient monitoring system has successfully implemented patient life and condition and saved lives on time.

IOT based Fall Detection for elderly people

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Abstract— Falls are the most dangerous form of an injury sometimes even leading to the death of an individual. Due to some negligence it is found that deaths caused is increasing rapidly, a survey was also made by WHO. It is globally considered as a major health public problem. The injury caused by disease for all people depends on the individual age and health factor.As the recent studies report usually highest death rate is caused over the age of 60. Therefore, this paper proposes an IOT based fall discovery system that will help prevent the risk leading to injury or death of an individual. The system monitors the person's movements with the help of an accelerometer sensor and detects a fall. An alarm is activated and a message is sent to the caretaker and a nearest hospital along with the location. The project also consists of an android application which includes a voice output and the location.

Educational Systems Design & Web-based Learning

IACIT-2021-PID-524
IACIT-2021-PID-549
IACIT-2021-PID-558
IACIT-2021-PID-582
IACIT-2021-PID-584
IACIT-2021-PID-599
IACIT-2021-PID-600
IACIT-2021-PID-633
IACIT-2021-PID-637

Chemistry with Java

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***Abstract*—**The Chemistry with java is an application which combines the Organic and the Inorganic world of Chemistry into a single application which can be accessed by users across all changes to promote the learning and the understanding of the subject by introducing visual aid to the subject. The application is developed basically with three levels The User Interface being built using the Swing framework is an API for providing Graphical User Interface across all platforms. The Intermediate level we implement Java Database Connectivity for SQLite3 implying that the underlying base layer we use SQLite3 as the database. For the Organic world of Chemistry we use an API named OPSIN (Open Parser for Systematic IUPAC Nomenclature) which converts the general name of the Organic Compound into the IUPAC name of the same compound along with its standard structure.

Web Based Data Visualization and Data Preprocessing Tool

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***Abstract*--**The escalating adoption of Machine Learning techniques has given a bigger picture to newbies trying to explore the usage of it. Our tool deals with the idea of helping them, in order to make their lives easier. Various visualizations and algorithms have been developed to help Machine Learning enthusiasts decide upon the best model. Deciding the perfect model needs enough time which now can be reduced by the solution provided in this tool. This interactive technique helps users with some expertise to explore and validate predictive as well as classification models. Once the user provides the dataset, the visualization techniques discussed in this tool lets the user decide to select the features that are most suitable for training the model. It allows to decide upon the importance of a particular feature and know the dataset predictions across various algorithms used for regression and classification. The accuracy percentage or the precision, recall score for regression and classification models respectively can be seen in order to know the best model.

Web Based Expense Approval System

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Abstract— 'Web-Based Expense Approval System' is a responsive web application whose main aim is to provide a utility to review, approve, and maintain an organization's financial transactions. When there is a need to approve invoices and transactions by various stakeholders located in different parts of the country, the invoices must go through a designated authority at every level, where they are reviewed and approved/rejected. On similar lines, the invoices should proceed through the stakeholders residing in the subsequent levels until it reaches the highest authority, which generally would be an administrative office of the organization. The invoices undergo a series of checks for regulatory and compliance norms. Once these necessary checks are completed, the invoices get the final approval, and the amount gets disbursed.

Automated Question Unique Arrangement(AQUA)

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***Abstract*—**With the world digitizing and moving at a fast pace, framing questions for examinations or learning is a time-consuming process and requires a lot of critical thinking. Questions we solve in the exams, for instance, school and college level examinations, are similar to the last year papers and contain repeated questions with little or no paraphrasing or modifications. Educators spend a significant amount of time in preparing question papers to come up with creative brainstorming questions. Automation has become a vital aspect of life. New technologies are coming up every day to minimize manual work and make everything automated with just a click. Considering the present pandemic scenario, education is now internet based and exams are being conducted online. Most of the examinations are based on multiple choice questions and these questions are, in most cases, taken from popular quizzing websites. This practice makes it easier for students to find the correct answer without even studying the subject and increases malpractices. We propose an automatic solution to the issue of making questions that will save time and energy and also promote proper learning with our model "A.Q.U.A – Automated Questions Unique Arrangement. It is a machine learning model that uses transformers for natural language processing and generating meaningful and understandable questions from the given context.

Fake Indian Currency Detection App

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***Abstract*—**The aim of this paper is to identify counterfeit currency and report on the findings. Using a mobile camera, the model accepts the photograph. The extracted features from the scanning image are compared to a series of models. When a match is found, the outcome is outputted, indicating whether the match was true or not. Image resizing, image filtering, sobel edge detection, and template matching are the four algorithms used in this article. Despite the fact that printing false currencies is unlawful, counterfeit currencies continue to circulate in areas where there are no forms of verifying the currency's validity. The aim of this project is to avoid illicit notes from being distributed further. The project's aim is to identify false or counterfeit currency. It is accomplished by taking a sequence of steps in the same order each time. To begin, a cell phone is used to capture a picture of the currency note (camera). Second, the captured image is resized to or scaled down to 500 x 300 pixels. After that, a bilateral filter is used to eliminate noise from the signal. The features that determine a currency note's validity are then detected using the sobel operator. Correlation regression is used to match the characteristics of the note to those of an authentic note. Finally, if the note is genuine, the features are listed and shown.

Research Bolster – A Web Based Digital Library Application for Research Assistance

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***Abstract*—**Publishing a research paper may seem puzzling and a lot of time is spent in search of a base paper. Contacting the authors for assistance, getting queries answered, finding partners for collaboration or tracking their own research progress are all challenging tasks. In this app, the user gets to find and download the various research papers published by members of the university. This would empower the user with the ability to get in contact with the authors and co-authors for assistance or any queries. The goal of this research is to provide a platform for users to find people in close proximity for guidance and help. We have implemented this web based digital library using the technologies: HTML with CSS, Node Js/PHP, MySQL database and a web server.

Web Application of College Event Management

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***Abstract*—**The project is to make a website to choose the event anywhere at your fingertips. We make user experiences to manage all your events, check-ins. To check the bond between explicit parts of plan and students' counters. Following an occasion was rarely this simple. All events heads application is worked for the organizers who needs to grow their event reach and maintain it without any disturbance. All occasions coordinator application is worked for the coordinators who needs to develop their occasion reach and oversee it without any problem. Our esteemed occasion coordinators are currently utilizing it to track each participant and oversee for each exactly at the touch screen. In this period of computerized unrest, there has been an ascent popular of web designers who can create easy to understand web stages, for example, versatile applications, web applications. The client base for online web applications is on an ascent to. To test the connection between explicit parts of marry plan and client's encounters. The exploratory plan and convention of the investigation will be introduced and talked about.

Parikshik – Online Examination System

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***Abstract*—** This project is a web portal which is implemented using the MERN Stack. In the current generation, lots of the College examinations like internal assessments, final exams, and many other multiple choice based examinations are conducted through an online platform. Online examination system helps students to take up multiple choice based examinations more effectively. Teachers can add/delete questions along with the options and set the correct answers for each of them. The Admin can maintain the student and faculty database and specify the exam period and allot the students for the particular exam, displaying the final results for students.

Voice Based Email For Visually Impaired

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***Abstract*—**The Internet is one of the fundamental facilities for daily life. However, even with some service provided by the internet, it is difficult for blind people to access certain text materials, such as E-mail. Advances in computer-based technologies, such as screen readers, have greatly aided the visually impaired in navigating Internet applications. Interactive environments, which are based on audio data, have also greatly aided the visually impaired. However, such systems would not help visually impaired people in many countries, especially in the Indian subcontinent. This is primarily because of the technological gap between India and other advanced countries around the world. The aim of this paper is to establish a request for the files to be sent via voicemail using speech recognition. When all activities are overactive, the cognitive burden of blind people recalling characters and typing on a keyboard is reduced. The aim of this paper is to design an email architecture that will enable people with visual impairments who have never used email before to access communications services with ease and effectiveness. This Voicemail system is designed so that visually impaired people can quickly and easily access and respond to emails. The system reduces the psychological functionality that visually impaired people need to recollect characters using regular Braille keyboards that are usable, in addition to making mail facilities easy and effective. The graphical user interface of this approach was compared to

the traditionally usable e-mail system interface. The most significant aspect of improving this technology is that users do not need any prior knowledge of keyboard shortcuts or other keys. This is an android application, specially developed for people with visual impairment. This is Android application designed specifically for people visually impaired. This app provides a primarily voice-based mailing service that allows you to browse and send mail without any assistance. To perform such actions, users must use keywords such as email, read, mail, to, and so on. A visually impaired person can use this program to access emails in a comfortable and efficient manner. As a result, people's reliance on others for their own mail-related tasks is reduced.

Data Mining & Artificial Intelligence-III

IACIT-2021-PID-543
IACIT-2021-PID-551
IACIT-2021-PID-552
IACIT-2021-PID-556
IACIT-2021-PID-557
IACIT-2021-PID-573
IACIT-2021-PID-578
IACIT-2021-PID-586

Survey on DNS over HTTP's using various Machine Learning Techniques

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***Abstract*—** The confidentiality of information became need for client through network communication channels. Heavy traffic over internet increases security attacks, data breaches and network traffic attacks. This situation is becoming difficult for humans to handle alone. So developing a software system for defending against cyber-attacks and monitoring heavy network traffic is required for secure network correction and for fast traffic tracking. With the help of intelligent agents in DoH, the monitoring and unauthorised data usage within and outside of information security community is observed and handled properly. DoH with machine learning agents provides encrypted transactions and providing confidentiality of DNS queries and response in transit on networks. The data protection in-between the sender and receiver is handled with fast accessing. DoH and DoT are two protocols available for secure DNS queries and responses with underlying transport channel. In this paper the survey is focusing on DNS over Https privacy, performance and finding suspicious traffic over the network channel with various techniques. Identifying network traffic is highly required because without perceivability of traffic in DNS, finding the machines which are infected, and detecting network attacks becomes difficult.

Sign Language Recognition Using Convolutional Neural Networks In Machine Learning

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***Abstract*—**Sign language is a way or means of communication used by individuals with speaking and hearing impairments. It is one of the essential means of communication for such individuals to stay connected with the rest of the world and to express their ideas, needs or beliefs.There is a great need for an efficient and cost-effective real-time translation software or tool in the modern-day world to understand what the disabled individual is trying to express with accuracy. The proposed system is a real-time translation software or tool used for the conversion of hand gestures into natural languagessuch as English used by people for communication. The translated data will interpret the alphabet or number associated with the sign shown to the live camera feed. The software proposed in this project is created using Python, NumPy, OpenCV, LabelImg and TensorFlow. The image or video obtained from the camera device will be processed using convolutional neural networks (CNN). The CNN model is pre-trained with a large dataset from open

sources or using a custom dataset on sign language gestures. Based on the recognition rate and prediction analysis from the CNN model, the provided image or video will be classified as the respective Alphabet or number from the American Sign Language Set. This helps the individuals to understand the sign language used by disabled individuals with ease.

Radical Sound Valuation Of Fetal Weight With The Use Of Deep Learning

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***Abstract*—**It is a very complicated task to identify and decipher the standard output plane of the fetus in the evaluation of the second trimester of 2D ultrasound, which requires a long preparation time. In addition to directing the test to the correct area, it is difficult for a technician to distinguish the applicable structure in the picture. The programmatic picture preparation function allows the device to provide assistance to experienced administrators to help them solve these problems. In this article, we propose a novel strategy that relies on convolutional neural networks. Therefore, this strategy can identify 13 standard fetal views in freehand two-dimensional ultrasound information, just like locating fetal structures through a bounce box. An important promise is that organizations need to figure out how to use picture-level markup to limit the objective life structure, and the accuracy of the map depends on the relevance of the organization. Tissue engineering aims to work continuously while providing ideal benefits for localization tasks. We provide the results of continuous reviews, recover outline outlines from saved pictures, and localize them in an extremely large test data set, which includes pictures and video accounts of complete clinical peculiar examinations. We tracked and found that the proposed technology completed the practical group test that showed continuous discovery, and obtained the accuracy of the review outline recovery. Similarly, the accuracy achieved on positioning tasks.

Facial Mask Recognition

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***Abstract*—** In this Corona virus global health happened due to a virus of family known as Coronaviridae is radial around the globe. The damage done by this virus is intense, is has affected the humans financially, physically, and mentally. People are scared to go out like they use to before the spread of the virus. Many actions have been taken by the central and state government in India and Government of other countries to decrease the spreading rate of this virus, wearing a facial mask main of them. This trained model has achieved and exceptionally great result with accuracy over 98.5% on recognizing people who are wearing mask or not. We hope our model will help in reducing the spread of the COVID-19 virus.

ForecastingAir Quality Using Random Forest Regression with Hyperparameter Optimization and LSTM network(RNN)

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[IACIT-2020-PID-557]

Abstract— In recent times, due to the increase in air pollution and its impact on the everyone's health and environment; it has become a very tedious task to monitor and check the quality of air. Predicting the quality of air is a highly tangled task due to the volatility, particle nature and variables constituting the pollutants. It has become pertinent to check the quality of air in rural / urban areas due to the impact it has on people's health and the environment. In this paper, we first do comparative analysis of popular machine learning method, linear regression, decision tree, random forest, k-nearest neighbors (KNN), random forest, XGBoost and L1 and L2 regularization to forecast pollutant and particulate levels and to predict the air quality index (AQI). Then we apply cross validation and grid search to optimize our random forest model. Finally we predict the model with Long short-term memory (LSTM).

Smart Kisan – A Machine Learning Based Agricultural Portal

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***Abstract*—** The aim of this paper is to carry out work that result in a good friend to farmers in every way. The work primarily recommends a high-yielding crop to the farmer based on regional soil data and the farmer's requirements. The job entails analysing a database of different types of soil from a specific area. To improve the analysis' efficiency, a machine learning method called linear regression is used. The study also implements disease detection in crop leaves using image processing techniques and provides remedy/solutions to farmers with diseased leaves, which promises to be a preventative measure in the future. The carried out study has an effect on various cultivation methods for various crops, assisting farmers as a "SAHA PATI" for this work. This service assists farmers in determining the best method of cultivation based on climatic and geographical factors. The final section of the Paper introduces a programme that provides current market prices for various crops by connecting to a government website that is updated on a regular basis. This service assists farmers in avoiding being duped by business intermediaries. The overall work done with the agriculture-based component turns out to be the best application for the current situation.

REAL TIME OBJECT DETECTION WITH SURVEILANCE VIDEO USING CNN ALGORITM

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***Abstract*—**Recent advancements within field of computing (AI) have provided a chance to form autonomous devices, robots, and machines characterized notably with the flexibility to create selections and perform tasks while not human mediation. One amongst these devices, Unmanned Aerial Vehicles (UAVs) or drones square measure wide want to perform tasks like police investigation, search and rescue, object detection and target following, parcel delivery (recently started by Amazon), and plenty of other things. The sensitivity in playing tasks that demand drones and police investigation cameras should be economical and reliable. For this project, the Associate in Nursing approach to observe the target object or event, moving or still, for a camera is bestowed. Convolutional Neural Network (CNN) is employed for object detection of events. For the time period following, the following algorithmic rule responds quicker than conventionally used approaches, with efficiency following the detected object while not losing it from sight.

Deep Learning Method on Chest X-ray Radiography for Detection and Classification of Thoracic Disease: A Survey

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***Abstract*—** Recently AI researchers using Computer Aided Diagnosis (CAD) systems have demonstrated breakthrough performance in a variety of medical image analysis tasks. Diagnosis of thoracic diseases in Chest X-Ray is one among them. They are expected to assist radiologists with diagnostic excellence while diagnosing thoracic diseases. Deep learning models to identify one or two thoracic diseases in Chest X-Ray motivated an approach to develop a model that can detect and classify multiple thoracic disease in real time. In this article, we will review breakthrough applications built with deep learning models such as CNNs to detect and classify multiple pathologies in one exam on Chest radiography. Also we will discuss important design factors and future trends in computer aided diagnosis of Multi-disease classification problems in Chest Radiology.

Data Mining & Artificial Intelligence-IV

IACIT-2021-PID-553
IACIT-2021-PID-793
IACIT-2021-PID-795
IACIT-2021-PID-815

Transparent Medical Health Insurance System Using Block Chain Technology

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Abstract—Health insurance plan is a kind of insurance plan insurance that covers the price of an insured individual's medicative and surgical expenses. It is very necessary for each person to have insurance policies in this unpredicted era. However, the current insurance plans are dealing with many primary issues like accelerated fraud instances that mostly affecting the economy of the healthcare enterprise and there is no simple approach to gain insurance plan without involvement of third party executives. By involving third party executives, the people are facing added challenges like delaying in the insurance claim process and authenticating the insurance policy holders. Consolidation of block-chain technology into the health insurance plan can do away with the fraud activities, as it all the associated transactions are made transparent. Hence, the proposed method introduces a Permissioned Block-chain primarily based Transparent Medical Health Insurance System creating a permissioned block-chain community amongst hospitals, insurance organisation and insurance holders(patients) to grant transparency with all transactions, integrity and safety to the saved records of holders/patients. It additionally helps in get rid of the price with third-party executives and delay in the process. This work illustrates how this can be accomplish the usage of open-source blockchain framework Hyperledger Fabric and proves the transparency and integrity with the proposed system.

Secure Document Vault Using Blockchain and IPFS

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Abstract—Nowadays the data becoming important to day-to-day life. The interference in the data change is irrelevant which causes the data to lose and data stolen which led to bigger problems to overcome it we use encryption methods to secure the data. Our terminology is to prevent the datastore on the website cannot be accessed by any other party apart from the user itself. The technologies which are used are the blockchain which is acts as the database and IPFS for the store the documents. The IPFS returns the hash (SHA-256) of the file which is present on the network for storing and sharing data in a distributed manner. Which is called the distributed file system. By using the hash code anyone can access the secure file. After getting the hash code from the IPFS we will be going to encrypt the hash and store it into the blockchain which acts as the secure database.

Food Supply Chain Using Blockchain Technology [10]

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Abstract—Agriculture is the primary source of livelihood for about 58 percent of India population. Food supply chain its very complicated by fragmented inbound and outbound networks [9]. It consists of multiple agents or intermediaries in the marketing channel to realize a profit and successfully pass on the losses to the producer [3]. Food producers are facing multiple obstacles, from seasonal changes to the broken supply chain also their occupation is very laborious and demanding [3]. Most of the losses produced here are due to missing formation, miscommunication and lack of trust between the different intermediaries [3]. Especially the Indian food supply chain is highly dividable. Main it helps formers to sell their products with a valuable profit so people will never loose their trust on agriculture. So that it helps whole world to get their foods and whatever they need they can buy. Former is happy then he feeds whole world. This all is possible only because of using block chain technology.The proposed system uses blockchain technology which facilitates the transfer of data or useful information and transparent manner pertaining to food supply management. This system ensures trust and brings transparency across various stakeholders.

A Blockchain based Framework for Transparent Medical supply in Covid-19 Pandemic

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Abstract— The sudden occurrence of COVID-19 has made the world into big trouble. It is known that COVID-19 is a highly contagious and deadly virus. People initially infected have no symptoms, while some people are showing no symptoms. In this pandemic the government has shown great interest in smartphone contact tracking app that help automate the difficult task of tracing all recent contacts of newly identified infected persons. In this article, we are proposing our app covid suraksha yantra. We have used React for the frontend framework and node js for backend framework. We have given certain 5 quizzes about covid-19 compared to other recently developed apps. Comparative analysis of various application developed for Covid-19 has been studied and a clear overview of these application has been. presented in this article and finally we have introduced a blockchain framework known as Covid-19 Suraksha Yantra for medical supply. In this website we also provide the details of slots available for Covid vaccine with proper address, availability, duration, fee Type. We will also provide tracking of medicine across India with the help of blockchain technology.

Blockchain Technology

IACIT-2021-PID-617
IACIT-2021-PID-625
IACIT-2021-PID-632
IACIT-2021-PID-642
IACIT-2021-PID-644
IACIT-2021-PID-653
IACIT-2021-PID-662
IACIT-2021-PID-671

Face Mask Detection Using CNN and OpenCV

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***Abstract*—**With Covid-19 tormenting the entire world, masks have become an essential item when stepping out of the house as it greatly prevents the spread of disease-causing germs and viruses. However, people often seem to take it lightly and not wear their masks when they step out. Therefore, we propose to design a mask detection system that alerts the concerned people with an alarm when the person in question is not wearing a mask. For this, we shall be using the medical imaging dataset obtained on Kaggle. In addition to this, we incorporateCNN andResNet, in particular, to train the model and also OpenCV to test it with real time data. We aim to obtain a high accuracy to ensure perfect face mask detection,

An Approach For Loan Approval Prediction using Machine Learning

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***Abstract*—**Banking sector is one such field where the company needs more accurate results after analysis. There are many people applying for bank loans from banks or other finance companies each day. But the banks cannot provide loan to every individual who is applying for loan. There is a very complex task that the bank employees do to study and analyze if the applicant is genuine or not. To find this out, there are a lot of factors to be considered. Going through this huge amount of data can be a really difficult task and yet one cannot be sure if the applicant will be able to pay back the loan within the given time or not. The main objective of this paper is to make a thorough analysis of the test data and make predictions if the applicant is genuine or not. For this process, we are using Machine Learning where the trained data is used to make predictions.

Efficient Face Mask Recognition Method during the Covid-19 pandemic using CNN

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***Abstract*—** COVID-19 is an exceptional crisis causing an enormous numberof victims and security concerns. We have to make sure we minimize the transmission of coronavirus;individualsalso wear masks to cover themselves. Since a certain partof the face is covered it makes the mask identification a little tedious.The researchers' goal during an ongoing pandemic of coronavirus is to make recommendations to tackle this issue quickly and effectively.Face Detection is a common approach in computer vision and image processing.There are a number of latest algorithms designed to render the algorithm as precise as possible using convolutional architectures.We can extract the minute pixel details using the convolutional architecture. Our aim is to construct a binary face classifier thatmaydetect any face present in the frame regardless of its orientation,starting with the RGB image of any size used by the tool “Predefined

Training Weights of Architecture" with training being conductedby a Fully Convolutional Network. In a single frame, several face masks may be detected here as well.

Real Time Face Mask and helmet detection Using YoloV3 Algorithm.

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***Abstract*—** In this paper we have a real-time yolov3 object detector to train the model to detect facial masks and helmets in video footages, live feeds or images to look for public hygiene and safety. It uses a neural network to predict bounding boxes and their possibilities throughout the entire image. The dataset has been obtained online. The model has been trained using online images for different classes like wearing mask, no helmet; not wearing helmet and mask; wearing helmet, no mask; wearing both helmet, mask. If no helmet or mask is found, the SMTP library module provided by python describes a SMTP client session object to send a mail to any internet device using SMTP or ESMTP. The proposed framework was tested on a dataset which is a collection of videos capturing of people complying with COVID-19 safety protocols and video of people wearing helmets abiding by the road safety rules. The result obtained has a high accuracy and precision.

Classification of Diabetic Retinopathy usingConvolutional Neural Network

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***Abstract*—** Diabetic Retinopathy is a scenario in medical field which leads to the rise of damage of blood vessels in the retina which is due to diabetes mellitus. The proper detectionof these problems and the treatment should be done immediately to prevent loss of vision in a person. Presently, diagnosing Diabetic Retinopathy manually is a time-consuming process where they require experienced clinicians to examine the digital-colored fundus images. Here, we have proposed a machine learning technology using Convolutional Neural Network (CNN) approach which as emerged as an operative productive tool in medical image examination for the classification and detection of Diabetic Retinopathy(DR) in real-world. The different layers which areused to detect the brain tumor are conv2D, Activation, MaxPooling2D, Dense and Flatten. The set used here considers 750 retinal images, with 600 training images and the test set considers 150 images with the accuracy of 82.75% which ran for 80 epochs.

Unusual Event Detection in ATM Using Machine Learning

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***Abstract*:** This paper describes the detection of unusual event that occurs in ATM machine. ATM is a simple source for people to get their money in a faster way. Also, there are many thefts and crime happening in ATM. The COVID-19 outbreak is the toughest challenge we have faced. The main precautions to avoid the transmission of virus is to wear a mask and maintaining the social distance between us. Here we introduce a system to solve such problems by using a computer vision to keep track of activity and detect violations (Not Wearing Mask) and alerts a mail with violation photo attached to concerned authority. In addition to this object detection and weapon detection is also appended.

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.

Non contact advanced method of COVID-19 cases using deep neural networks with chest x-ray images

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[IACIT-2020-PID-671]

Abstract— The first appearance of the novel coronavirus (COVID-19) was on December 31st 2019, in the Wuhan City of China. This novel coronavirus (COVID-19) spread rapidly around the world, thus causing a pandemic. The most devastating effect was caused on the daily lives, global economy and public health system. In order to treat the affected patients quickly the most critical step is to detect the positive cases in much advance period of time in order to help prevent further spread of this disease. With the help of the recent findings, it has been found that the radiology imagining techniques contain the salient information about this virus. The advanced Artificial Intelligence (AI) technique coupled with this radiological imaging has found to be helpful for the accurate detection of this novel coronavirus (COVID-19) disease. This is an advanced application which is helpful for the study of this paper. In this study, the new model used for the detection of this coronavirus (COVID-19) by using the raw chest X-ray images automatically. This proposed model provides accurate diagnostics for binary classification (COVID-19 vs normal) and also the multi-class classification (COVID-19 vs Normal vs Pneumonia). The classification accuracy from this proposed model is about 98.09% for binary classes classification and 87.03% for multi-class classification.

Mobile Applications

IACIT-2021-PID-532
IACIT-2021-PID-606
IACIT-2021-PID-678
IACIT-2021-PID-681
IACIT-2021-PID-733
IACIT-2021-PID-800

"Namma Shimoga" – An Android Application To Register Complaints

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***Abstract*—** For Android Operating system Android studio is the official development environment or tool. It provides a combined environment for building the android applications for Android phones, Android TV, Android Wear and Android Tablets. And it will also provide functionality to build a code, test a code and debug a code as well. The main aim of this application is to address the key problems that are faced by people in their locality and give people a platform to notify the problems to the elected people and get solution for the same. In this Application various services are available so any person can intimate about the problem in his locality to the concerned authorities. This paper describe about the Complaint Registering application that is developed using Android Studio.

Shop Chain: An Android Application Simplifying The Shopping Experience In Day To Day Life

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***Abstract*—** With the surge in the number of people using smartphone devices all over the world, the mobile computing industry has been thriving. There are around 3.6 billion smartphone users worldwide as recorded till 2020 and we expect it to be 4.3 billion by 2023 [1]. In India itself, we have 696 million smartphone users and it is expected to be 875 million by 2023 [2]. With the increase in the population going online, online shopping has become very convenient. But we still face issues with shopping online at local stores or booking appointments at local hair salons like hunting for a particular item from the store to store only to find it's unavailable or the shop is closed. Through our application "ShopChain", we improve the local store shopping by providing them the opportunity/platform to get their stores online so they can update the customers with live updates about their store.

KRISHI SEVA BANDHU: MOBILE APP FOR GRADING FRUITS AND VEGETABLES

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Abstract- The backbone of India and even most parts of the world is agriculture. Maintaining perishable farm produce is important to not to waste it, which will impact the economy and food starvation. This paper presents a mobile application for farmers or farm produce owners to check the ripeness of fruits and vegetables, which will be useful to make decisions on selling and fixing the price based on grading. The application provides information on different ripening stages of the fruits and vegetables. It also presents the information on crop's requirements for growth in terms of soil, nutrients, weather conditions, season, etc., as a reference manual. In this work, firstly, identification of different stages of ripening of perishable farm produce in field/cold storage using image processing is performed. Secondly, a mobile application is developed to give real-time status and notification of farm produce. The application will be updated with the images taken by CCTV or mobile cameras at definite intervals and notify the product owner well in time before rotting of the produce. The assessment of fruit quality is important for the cultivator and the consumer. Maturity detection is very important for fruit/ vegetable warehouses. This fruit maturity mobile application is named

"KrishiSevaBandhu". The results show that the detection accuracy is 90% and the mean opinion score of farmers is 85%.

PETERIA: PET SHOPPING MOBLIE APPLICATION

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Abstract- Pets are Part of Everybody's Life and part of our family. They furnish us with friendship as well as with passionate help, lessen our feelings of anxiety, feeling of depression and assist us with expanding our social exercises and add to a child's confidence and good enthusiastic turn of events. There is a developing worldwide pattern to think about pets as a feature of the family. Of the around 7.6 million partner creatures entering creature shields cross country consistently, roughly 2.7 million are euthanized. The quantity of euthanized creatures could be diminished significantly if more individuals received pets as opposed to getting them. In view of these issues, we set off to make an answer utilizing a portable application which utilizes a proposal framework for sifting of inclinations. Web based business Machine Learning applications are what's to come. Stores like Amazon use ML to recommend items for their customers. Additionally, it gains from us, however from the joined insight of the multitude of individuals who live around there, and numerous other social components we probably won't have thought of.

E-Commerce website for B2B Services

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[IACIT-2020-PID-733]

Abstract— E-commerce is becoming a more powerful component of huge asset for B2b businesses. It allows them to not only lower purchase costs and provide a wider variety of additional resources, but also to improve communication performance between their clients and suppliers. As a result, the aim of this article is to analyze how businesses use Business - to - business E-Commerce, how it funds their businesses, and what the key advantages are. In light of the growing relevance of services in B2B markets and the rapid advancement in information technology, the paper assumes significant realistic and theoretical significance for the business world. It may be used as a foundation for more study on various strategies in B2B markets and examination of the position of E-Commerce since it represents an overview and summarizes a broad theoretical context on the subject. The paper will also help businesses make decisions on their E-Commerce investment policy.

University Web Application

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Abstract - The creation of a web application for the University that allows teachers to take online classes, assign quizzes, and manage students. The aim of this project is to use computerized equipment and turn it into a full-fledged computer application to automate the current manual system, meeting the needs of university so that their valuable data/information can be processed for storing for a longer period of time with ease of accessing and manipulating the data.The required software and hardware are readily available and simple to use. Students, on the other hand, may consult their previous year's question paper on the topic of their choice and take their assignments.

Advanced and Emerging Applications

IACIT-2021-PID-576
IACIT-2021-PID-577
IACIT-2021-PID-592
IACIT-2021-PID-593
IACIT-2021-PID-588
IACIT-2021-PID-614
IACIT-2021-PID-636
IACIT-2021-PID-652

Enhancing Security Authentication of Information Systems using Morse code and Facial Recognition

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Abstract— Information Technology Management is combination of Data Exchange, Algorithm Development and implementation of various technologies in order to solve the problems related to Information System security. The applications of data science are used by almost all Information Systems in various domains like educational institutions, finance, healthcare, business to handle large volumes of data. The practical applications range from predicting stock movement to predicting cancer. It is used in image processing to identity recognition, audio processing for speech to text prediction. Since authentication and security of the Information System are still not completely secure and is a matter of concern, we are able to implement a real time eye-tracing along with the facial feature recognition using Morse Code based secured authentication system to enhance the Security aspects of the Information Systems. Most of the traditional Information Systems has a single layer of security authentication and cannot be relied upon. In our findings, we do not find the existing systems to be completely secure and hence we focus on implementing multiple layers of unique security authentications using eyeball movements to form a distinct Morse Code and the facial feature recognition.

Protected JPEG Flows Reversible Data Hiding

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[IACIT-2020-PID-577]

Abstract **-** The entire report contains how a JPEG image is encrypted and sent to a user securely. In small message we first make the JPEG-image decrypter interacted with the concerned organisation. Then it is sent to the cloud server by the owner of the image, another security is added to the text that we send along with image. The steps during the encryption of the image and decryption of the image includes Huffman code and the movement of the histogram. Similar to the client who request this operation have the access to decrypt the image. Before this the staff extracts an additional message from the encrypted JPEG-image and restores the first encrypted image which is not compressed. After the client downloads, it will download the first JPEG-image bitstream. It is recommended in order to exceed Reversible Data Hiding -EI in the result key. Since the employee has completely improved the bitstream data encryption and decryption tasks, the owner of the image and the receiver do not need to perform any encryption or JPEG operations. Second, the payload of the inserted class is greater than the optimal load.

Crypto Tech-Coinage Predictor

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***Abstract*—**A cryptocurrency is a digital currency where it uses blockchain technology and cryptographic functions. The world has more than 5000 crypto currencies. Although machine learning has been successful in predicting crypto currency stock market prices but it's been quite restrictive in predicting real time price of crypto currency.

Next Gen Learning Universe

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***Abstract*—**The world today is seeing numerous technological innovations on a regular basis in various fields. The field of education too has a lot of scope to incorporates some of these innovations and gain immensely from them. One such technology is Augmented Reality. Augmented reality can in fuse class rooms with energy, bringing additional ingenuity and bilateral engagement in every session. Such innovative methods of teaching quicken the time spent in understanding convoluted topics. Our project aims to develop a Mobile Learning App that uses AR to enhance teaching methods.

Asynchronous Execution Platform for Edge Node Devices

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***Abstract*—** Asynchronous distributed execution platform which enables efficient and seamless user job submissions on a remote node from a cluster of edge nodes using reactive framework and provide real-time metrics of execution persisted on elastic data base. Queue are used for job submission along with different compute units delivering the infrastructure for execution of submitted jobs.

PC Vision Based Unpretentious Classroom Attendance Tracing Framework/Technique

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***Abstract*—**Fossil classroom environment follows a manual attendance marking system either by calling the student's names it interrupts the teaching procedure and also takes a lot of time. It can also lead to factors like a proxy. To overcome this issue we have introduced a high-definition camera that will be installed in every classroom which captures the student images from all angles.

PLANT DYNAMICS: Triticum Infection Disclosure

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***Abstract*—**Agriculture being the pillar of the economy for a developing country like India has a vital role in the survival of living beings on earth.Wheat is the most widely consumed grain on the planet. Deep learning is an evolving technology that is having a significant effect in the field of agriculture, assisting farmers in modernising their operations. One such application is the identification of plant diseases using image classification. Plant disease identification is important for long-term agriculture sustainability. Wheat plants are susceptible to a variety of fungal diseases.These diseases have an effect on the global economy. Using deep learning algorithms such as CNN, this proposed system aims to predict wheat diseases. To train, validate, and evaluate our model, diseased and healthy plants have been used. Based on the input our system determines if the leaf is diseased or not so that precautionary measures can be taken to prevent losses in wheat cultivation, which could lead to food shortages. Consequently early identification of diseases of crops like wheat and rice that are staple food of people in many countries is critical.

GAME DEVELOPMENT USING UNREAL ENGINE 4

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***Abstract*-** Our project is primarily focused on educating the people who are willing to learn and have interest in coding C++ is great start and showing its application on unreal engine is a great interactive way of doing so. The project will help those in such needs and the perfect platform for learning is by making it game which is fun. Flexibility is another aspect that can applied here so learning at your preferred curve of learning to match your learning pace so anyone can learn this at any pace and enjoy the learning process. This project can be used as a demonstration for big corporates in the gaming industry where u will be able to explain the game how it works in depth with the coding magic behind it .It also uses decision making algorithms where NPC bots interact with the player.

IoT & Smart City

IACIT-2021-PID-626
IACIT-2021-PID-676
IACIT-2021-PID-691
IACIT-2021-PID-725
IACIT-2021-PID-727
IACIT-2021-PID-728
IACIT-2021-PID-813

Smart Battery Management System for Electric Vehicle

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***Abstract*—**Electric vehicles are showing some promises in the automotive industry and can be the answer for mitigating carbon footprint. In the process of upgrading electric vehicles to the customer demands, battery performance plays a vital role in deciding the performance of electric vehicles.
So, Battery Management System becomes the brains behind monitoring and controlling the battery. Real-time sensing of the battery parameters, decision-making capability to choose the type of charging, and which cell to be charged are all the functionalities of BMS. All these criteria can be assessed precisely and efficiently via processors like Raspberry pi, along with IoT and cloud computing technologies. These approaches can be used for remote accessing of the battery's performance, which will help the customer and the company to analyse the vehicle's condition. They also help prevent battery degradation. Since IoT and cloud computing technologies are being used, if an adverse state occurs in the battery, the customer can be notified directly via their mobile. In this article, a combined technology of locally hosted processor and cloud-based decision making has been discussed to improve the battery intern Electric Vehicle's performance.

FIRE DETECTION AND NOTIFICATION USING NODEMCU AND RELAY BY IoT IN PRIVATE BUS

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Abstract- Fires arise increasingly in public transportation systems, resulting in the destruction of the most precious innocent suffering and public property. There are some strategies for preventing fires and reducing the scale of losses in the event of a fire in the public transportation system. However, the harm becomes severe because a fire team will be unable to arrive at the opportune moment due to failure of coordination. As a result, we should continue to control and mitigate the losses incurred by bus fires. The key goal of this project is to identify fire incidents and notify the appropriate authority as soon as possible. If a collision or injury occurs, flame detectors are being used to identify the fire. The sensors are linked to a central controller, which controls the water sprinklers when a fire is detected. In the proposed scheme, the central controller is a Node MCU. Finally, the data is sent to the cloud, where it can be accessible to all government agencies.

Smart IoT Mirror using Raspberry Pi

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Abstract- This paper depicts the planning, design, and working of our Smart Mirror. Each of our day starts by grooming ourselves in a mirror. A recent study shows that an average person spends at least an hour in front of a mirror daily. This time is solely spent observing ourselves. Our idea is to utilize this time for multitasking and get some real work done to save one of the most precious commodities of our lives, i.e., Time. We spend quite a significant amount of our

time daily on checking news, our calendar events, current weather, or weather forecasts. Our idea is to do all of this while looking into our mirror, which we will anyway. Our smart mirror is built on this idea and uses a monitor connected to a Raspberry Pi and a two-way glass mirror to provide us with both a mirror and an information system. The best part about this smart mirror is that it uses all the open-source modules. The operating system of a Raspberry is open-source, namely, 'Raspbian O.S.' and the 'MagicMirror2' library that is used to install the modules for a smart mirror is also open-source. This actively demonstrates that we can use all the available third-party modules on the internet and build our own modules to integrate with the default 'MagicMirror2' module.

PORTABLE DEVICE FOR HEALTH MONITORING OVER IoT

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***Abstract*—**Spirometer and commonly known as Respiratory Analyzer is connected to Arduino UNO in the project. We are using push switches to select the age of a person. It starts from children to elders of ages. Firstly, we need to press the start button and then select the age by using switches. Then we need to inhale the air through a pipe attached to the spirometer then the inhaled air will be measured by IR proximity sensors which will be in contact with the spirometer. The inhaled air volume is different for different age groups, humans starting from children to senior citizens. The LCD is used to display the health condition of the person as well as will display the reference value of that person based on the person's age and displays the heartbeat and temperature values. If the person's intaken air volume is not as same as the reference value, then it will display in an LCD and a message will be sent to the respective persons through GSM. And the values of heartbeat, temperatures, and age, and air volumes will be saved in a cloud through a Wi-Fi module.

HOME AUTOMATION USING SMART AI ASSISTANT

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[IACIT-2021-PID-727]

***Abstract*—** Artificial intelligence is taking over all the platforms and applications and making them more and more user friendly and intelligent and gives the application a human like behaviour and thinking. AI is being used everywhere now-a-days because applications that use AI are able to learn and improve and require less maintenance. This project "Home automation using smart AI assistant" is a voice command-based AI assistant coded using python and Natural Language Processing NLP that can respond to user queries and responds to voice-based commands of the user. Using this AI Assistant users can send emails to anyone just by speaking the receiver's name, subject of email and the email body. The users can send WhatsApp messages to any of their contacts just speak the message and to whom you want to send it, users can do google searches and open google tabs by voice search, users can do Wikipedia searches and can also open any YouTube video they want to watch. With this AI Assistant we can also get weather updates and news updates, just speak what news updates you want and the Assistant will read it for you. We can also check the computer performance, add remainders and to-dos. We can open our documents, play our favourite music or watch our favourite movie and do many more thigs just by a simple voice command. This assistant is also used for voice-controlled home automation. Using this Assistant, we can control our home electrical appliances with simple voice commands like turn on the room lights, fans, AC etc.

Smart Cars - Predicting Future Customers

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Abstract—Smartcars which are also known as autonomous cars or self driving cars which moves with little or no human input. They are efficient and avoid accidents so many car manufacturing companies have started working on these autonomous cars and for this process they are investing huge money in R&D for best and efficient cars. But the main issue is as they are investing more money they are expecting to get huge profits so we came up with a solution. In this

paper we will set up a machine learning model which will predict the future sales or customers buying these car sand this will increase the income for the companies. So as to achieve this predictive model,we will make use of frame works and libraries of python.

AN IOT BASED APLLICATION FOR THE SAFETY OF WOMEN

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[IACIT-2021-PID-813]

Abstract-In India even though women have more powers and empowerment, still she was suffering from crimes like rapes, kidnapping, molestation, to bring the end of these activities or crimes, the women safety product came into existence. This product helps the women at the time of danger situation, or any attacker attacks the victim. This paper contains the details of the model and implantation, flowchart of the women safety in “Smart Watch”. The components that are required for building up the safety app are: - A microcontroller (ATmega2560), GSM module, GPS module, IOT module, buzzer, electric shocker. In this project, when the women shout her personal code which we gave to her while installing this application and when the smart watch sense the voice. Once the device is in ON, automatically GPS (Global Positioning System) will the live location of the victim and sends the live location URL through message and what’s up message to the saved contacts in the Smart Watch. When attacker tries to attack the electric shocker automatically generates the shock to the attacker. The IOT module will track the location of the victim continuously and updated URL is again sending to the saved contacts. Buzzer will automatically ONs when the watch recognizes the code of the victim. The live tracking location and buzzer sound are in continuous until “STOP” button is clicked. The main advantage of this product is that Smart Watch is very less weight, less in cost, easy to takeout and travel, and continuous tracking the location of the victim or users.

Emerging Trends

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IACIT-2021-PID-817

Comparative Analysis of Algorithms used for Twitter Spam Drift Detection

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[IACIT-2020-PID-628]

Abstract— Twitter is one of the most popular social networking sites these days, among many others, with a lot of user engagement. This microblogging site encourages social interactions, allowing users to stay up to date on the latest news and events and share them with others in real time. Tweets are limited to 140 characters and can include links to related websites and tools. With a platform having such wide reach, it is prone to be targeted negatively and spams are one way to do it. Spammers use this platform to display malicious content that is inappropriate and harmful to users worldwide. Many techniques in Machine Learning have been implemented to detect spam and overcome it. However, with the advent of recent technologies it has been observed that the properties of tweets vary overtime making it difficult to detect spam leading to the "Twitter Spam Drift" problem. This paper reviews the papers published since 2018 that have focused on the spam drift problem and gives a comparative analysis of the different algorithms that are used on the various datasets to tackle such a problem.

Detection of Coronavirus illness using Techniques of Deep Learning and CNN

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Abstract- A year has been passed with the global pandemic creating havocs in everyone's. The novel Coronavirus is still raging around the globe causing catastrophic consequences on the entire health and wealth of humankind. Tests are being conducted in an insane amount on the suspected individuals. Infections that are gained through respiratory course, for example, the lethal SARS-CoV-2, are determined to have the assistance of direct identification of viral parts in respiratory examples. The two most generally utilized techniques to do this are nucleic corrosive enhancement tests through polymerase chain response/reaction (PCR) or antigen-based tests. This can take a while to generate results as there is steady increase in number of cases and causing delay in laboratories. Early detection of the virus is life saviour, if the virus is left unnoticed it can be fatal for ones' life. The current industrial era is ruled by fields of artificial intelligence and machine learning; hence this paper is an attempt to use one of these practices for novel corona virus prediction using chest radiogram images. Here dataset of Chest Roentgenogram images of patients infected with the corona virus and normal Chest Roentgenogram images are used to detect coronavirus infection. The study employs an efficient approach of application Convolutional Neural Network in predicting if the patient is affected and unaffected with the virus. The prepared model created a precision pace of 90% at the time of the performance preparation.

Parkinson 's disease Detection from Spiral and Wave Drawings using Convolutional Neural Networks

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Abstract-Parkinson's illness (PD) may be a chronic sickness that affects several thousands of people. From the start, palladium patients feature with muscle rigidity and tremors. Most exams discover Parkinson's illness by written tools,

, like drawing spirals and meanders on a model paper. Later, associate skilled analyses the drawings thus on classify the illness. During this we tend to area unit exploitation machine learning technique ,in this method machine can learn the data by examining digitalized version and written skills. Notably, we've associate interest in Convolutional Neural Networks has ability in learning options while not human interaction.

DIABETES DISEASE PREDICTION USING MACHINE LEARNING ENSEMBLE METHOD

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Abstract— Machine learning involves AI , and it's utilized in solving many problems in data science. The machine learns patterns from the prevailing dataset, then applies them to an unknown dataset so as to predict the result. Classification may be a powerful machine learning technique that's commonly used for prediction. Some classification algorithms provide satisfactory accuracy, whereas others provide a restricted accuracy. This paper explores a method called ensemble classification, which is usually used for improving the accuracy of weak algorithms by merging many classifiers. Experiments with this tool were performed employing a diabetes disease dataset. A comparative analytical approach was done to work out how the ensemble technique are often applied for improving prediction accuracy in diabetes disease. The end goal of this paper is not only to increase the accuracy of the weak classification algorithms, but also on carrying through the algorithm with a medical dataset, to show its ability to foresee the disease at an early stage. The results of the study specifies that ensemble techniques, such as random forest, are successful in increasing the prediction accuracy of weak classifiers, and exhibit satisfactory performance in identifying risk of diabetes disease. A maximum increase of seven accuracy for weak classifiers was achieved with the assistance of ensemble classification.

Heart beat level prediction using Machine learning Algorithms

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Abstract— Heart disease is one of the leading causes of death in the world today. Cardiovascular disease prediction is a critical challenge in clinical data analysis. Machine learning (ML) has been shown to be effective in assisting with decision-making and prediction from the vast amounts of data generated by the healthcare industry. Many lives can be saved if heart disease is detected early. Machine learning classification techniques have the potential to significantly benefit the medical field by providing accurate, unambiguous, and rapid disease diagnosis. a result, both doctors and patients should set aside time for prediction. This paper proposes a model to compare the accuracies of applying rules to the individual results of support vector machine, decision trees, logistic regression, and Random forest on the Cleveland Heart Disease Database in order to present an accurate model of predicting heart disease

Data Placement Algorithm in Heterogeneous Environment Utilizing Data Locality

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Abstract— During pandemic circumstance world, the size of data is exploded like rocket speed. At the same time, there is a need to process it and investigate the enormous volumes of information. In company and research applications, there is a need to process peta bytes of data in proficient way day by day. One such tool is Hadoop and is most broadly utilized in information serious applications. The Hadoop default processing lies in homogeneous in nature. The limit of enormous measure of data in Hadoop is finished utilizing Hadoop Distributed File System (HDFS). The performance is degraded when it applied to heterogeneous environment. Hadoop mainly uses 2 components viz HDFS used for storage purpose and MapReduce used for programming. In this paper we introduce Optimal Data Placement Algorithm (ODPA)

Estimating the impact of Engineering education among students in India using Machine Learning and Deep Learning Techniques

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Abstract-After a deep questioner among students, faculty members and higher education experts. The demand for qualified engineers in the specific field as understandably gone down. The situation is grimmer for tier-2 and tier-3 colleges in India. The purpose of opting engineering course is not to get expertise in the particular course, instead to get a job in government sector with valid degree. The problem identified in the field of engineering education towards improving the quality in education is addressed with the help of exploratory data analysis. The dataset used in our experiment is collect from UCI machine Learning Repository having 33 variables and 1044 observations. The contribution made in the paper is to identify the vital attributes using single and multi-variant regression techniques. To perform prediction using Decision Tree, Random Forest, Support vector Machine and compare their performance in terms of classification accuracy and F-Score. In addition to that a convolution Neural Network (CNN) model is established in which, the vital attributes identified using regression techniques are provided as inputs and weights at each stage is estimated using Gradient Decent algorithm with step size 0.5. The classification accuracy from 63% is improved to 97% with the help of CNN model in 26664 iterations. The finding of the present research states that student having backlogs are less frequently opting for higher studies.

Data Mining & Artificial Intelligence-V

IACIT-2021-PID-660
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IACIT-2021-PID-710
IACIT-2021-PID-714
IACIT-2021-PID-790

Soil Health and Cattle Graze Checker

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Abstract: This project is to solve or ease the major problem of farmers all around the globe. This is based on the utilization of a few of the basic sensors to solve the major problems. The problem of cattle herd graze and humidity control will be monitored strictly under this project. A basic but utility project that will be available to all the farmers at a low cost.

Educational And Immersive Game Development

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Abstract- Educational Systems have remained the same for decades while the technology and its effect on our daily lives has undergone tremendous progress. Technology has been incorporated in various other fields with great success while education has been conservative and slow to adapt, this has been problematic in a number of ways, since entertainment, news, social media have evolved to better suit the human psyche. This creates a gap between these aforementioned systems and education where education is way behind in terms of engagement and immersion compared to entertainment and such. We propose one way to tackle this divide is to use "Educational Games" which use technology to make education engaging and entertaining

Using Hyperlocal Delivery System to accelerate Localised Business

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Abstract- Hyperlocal organizations give conveyance of products and utility administrations to purchasers, merchandise delivery including staple goods, food, prescriptions, individual requirements and others, and utility administrations incorporate plumbing, home cleaning, yard care, electrical and drainage. Every one of these labor and products is given through organization of conveyance individual from business or people in neighborhoods. Hyperlocal administration stages help eateries, lodging, cheap food outlets, organic products or vegetable, fish, meat, and different retailers to adequately draw in and deal with their business without agonizing over shipment. Simple associability to the web, cell phones expansion has been fundamentally boosting the interest for hyperlocal administrations. Occupied way of life further lifts the development of the online food and staple requesting market, which thus fuels the development of the hyperlocal services in upcoming online market.

Intrusion detection recording system with biometric lock

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Abstract: As the present security system has several loopholes that can be exploited to obtain access to the desired locations, posing a significant threat to society, we engineered an intrusion detection recording system with a biometric lock to address this problem. This project is a noise sensor-based device with an automatic recording system that can also lock the locker or door using a fingerprint-based biometric interface.

BYOS-Be Your Own Saviour

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Abstract— Murders, thefts, rapes, kidnapping, trafficking are some of the major crimes in our country. Some get reported, out of which only some get considered and even lesser solved. Regardless of this procedure, the victims seldom recover. In worse conditions cannot be brought back. Obviously, the authorities can't stop these events from happening, the maximum they can do is try to get hold of the culprit/s and spread awareness after an event has occurred. Thereby, Personal safety is foremost a personal responsibility. An essential fact to know is that you have to be your own Saviour. Here is when BYOS (Be Your Own Saviour) comes into the picture. It's built and packed in with all the fundamental features that one should have in various situations. the best thing about BYOS, well it's a glove, a simple yet cool wearable gadget.

Smart System For Document Verification

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Abstract—Traffic controldevice is one of thevital sectors in any united states for its smooth travel. In India, Communication innovation in social coveragelocation has now no longer been altogether actualized to enhance its nature of administration. Growing use of verbal exchangeeramany nations have applied e-card device. At giftthere may be no presentdigitalsite visitorscontroldevice in India aside from Digi-locker. The factor of this proposed e-clever card framework is to enhance effectiveness, get right of entry to of drivers record verification offerings and administrations. Using the e-clever card all drivers' records, car details, carbeyondrecords and carbeyond violations may be accessed viaan internetweb pagewith the aid of using the legal parties. Our proposed concept conveys the advantages of stable transportation offerings in India usingrecords and correspondence advancements. Digital datapermit for highermonitoring and extra standardized documentation of drivers and vehicles, which has the ability to lessen error.

Identification of Abnormality in Leaves

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Abstract— Agriculture is one of the primary activities and is closely related to the natural environment. Our economy mostly depends on Agricultural production. Farmers come across many limitations in detecting and controlling plant diseases. Detection of disease through automated techniques is useful as it reduces the oversized work of inspecting crops of huge farms. The preceding models took so much both in training and for processing also. The other models used KNN and there was no deep learning in the process and resulted in less accuracy. So, we are using the CNN model and ANN algorithm for the deep hidden layers for the identification of leaf disease. Building ML model with huge datasets helps in detecting leaf disease detection accurately and quickly. This project presents a machine learning technique to automate in detecting and classifying plant leaf diseases.

E-FARMING SYSTEM

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***Abstract*—**E-cultivating will fill in as a route for the ranchers to sell their items across the state just with some essential information about how to utilize the site. The site will direct the ranchers in every one of the angles, the current market pace of various items, the complete deal and the acquired benefit for the sold items, admittance to the new cultivating procedures through procuring and unified way to deal with see various governments agribusiness plans including the pay plans for cultivating.

E-Fitness Promoting For Yoga and Exercise For Healthy Living

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[IACIT-2021-PID-790]

Abstract—Web technology in particular, has radically altered the way of health care is historically delivered.Observations demonstrated that the Web is capable of delivering accurate, reliable, and timely information to users with interactive and personalized content. Web is the best way of delivering the information to the users and client. Web development entails specific tasks related to the creation of websites for intranet or Internet hosting. Web development, also referred to as Web programming, is the process of creating interactive Web pages.Web design, web content creation, client-side/server-side scripting, and network security configuration are all part of the web development process.Yoga is a technique that aids in the regulation of one's mind, body, and soul. It combines physical and mental disciplines to achieve a peaceful body and mind; it aids in stress management and relaxation. It also aids in the development of flexibility, muscle strength, and overall body tone. It boosts your capacity, stamina, and respiration.A person's health is extremely important because a healthy person acts as an example to others and is always the better option for all types of strenuous mental and physical activities.Physical activity improves the performance and strength of the cardiovascular systems, allowing a person to get more nutrients and oxygen to their muscles.

Data Mining & Artificial Intelligence-VI

IACIT-2021-PID-574
IACIT-2021-PID-591
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IACIT-2021-PID-612
IACIT-2021-PID-615

Twitter Spam Detection

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***Abstract*—** Twitter is an American social networking and micro blogging site where users can send and receive messages known as "Tweets. The number of characters is restricted to 280 for all languages except Korean, Chinese and Japanese. Users on social media platforms tend to easily believe the contents of posts related to any random events and some of these events happen to be fake. Twitter spammers may fulfil their malicious objectives, such as spam sending, distributing malware, hosting botnet command and control (C&C) networks, and launching other illicit activities in the underground. Hence we have proposed a system that will not only identify the type of spammers but also remove duplicate tweets. We have applied multi-classifier algorithms such as naive Bayesian, K-Nearest neighbor, Decision tree and Random forest on a twitter data set and their performance is compared, also the most accurate algorithm is found out. The results of the experiment have been very positive.

Face Mask Detection– A Machine Learning Approach

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Abstract— The COVID-19 is an unmatched emergency inciting immense number of incidents and security issues. To reduce the spread of Covid, individuals regularly wear shroud to promise themselves. This makes the face attestation an especially infuriating undertaking since unequivocal pieces of the face are hidden. A basic mark of intermingling of specialists during the progressing Covid pandemic is viewed as plans to deal with this issue through fast and suitable strategies. Face Detection has made as a remarkable issue in Image preparing and Computer Vision. Different new figurings are being envisioned utilizing convolutional developments to make the most of the as exact as could be viewed as ordinary. These convolutional models have made it conceivable to eliminate even the pixel subtleties. We desire to plan an equivalent face classifier which can perceive any face present in the bundling paying little psyche to its course of action. Beginning from the RGB picture of any size, the method utilizes Predefined Training Weights of Architecture with arranging is performed through Fully Convolutional Networks. Here this it is correspondingly set up to see unmistakable facial cover in a solitary edge.

Cardiovascular Disease Prediction Using Machine Learning Ensemble methods

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***Abstract*—**Recently the main cause of death is occurring due to Cardiac arrest, due to these millions of deaths have happened in the past these costs millions of deaths happening each year. Data mining techniques have been significantly used as it helps in zero or less intervention of humans and it is seen that it is the best technique as it gives precise result with maximum accuracy. The study is made on ensemble methods and built a model using boosting and bagging classifiers. The proposed mobile application is built for a user interface that takes information based on several attributes. This mainly helps in the medical field such as laboratories that incorporate the developed model. The outcome of the proposed model predicts the probability of a person suffering from heart disease. The accuracy of the models is evaluated.

Smart Approach To Decrease Traffic Congestion Using Deep Learning

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***Abstract*—**Developing countries such as India face many problems when it comes to the system and management. One of the serious issues that should be tackled is traffic. Traffic management plays a vital role to have a better control over the system that showcases the standard of any country and affect the lives of citizens in many aspects. In transportation system, problems such as planning and scheduling, occur a lot and leads to traffic congestion which in turn becomes an obstacle for emergency vehicles, can cause road accidents, furthermore, it leads to increased pollution levels. Taking this problem into consideration we are proposing a traffic management model where OpenCV plays a crucial part. OpenCV (Open-Source Computer Vision) is a library with functions which mainly aims at real-time computer vision. Hence, to enhance the performance of our system, few algorithms have been executed and the results are compared. The more favorable algorithm would be suggested for real-time scenarios.

Distracted Driver Detection Using Convolutional Neural Network

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***Abstract*—** The deaths caused by road accidents are one of India's most pressing issues. The inattentiveness of the driver is responsible for almost 80% of all collisions. Mobile phone use, conversing with passengers, reaching behind the wheel to grab something, and drinking while driving are just a few of the factors that can cause a driver to become distracted. This project aims to create a reliable and effective system for detecting and classifying distracted drivers. The performance of Convolutional Neural Networks in the computer vision field inspired this paper, which presents a CNN-based paradigm which not only detects the distracted driver but also identifies the reason for distraction. For this purpose it is using a publicly available dataset from the Kaggle website as an input for this model. There are several different forms of distractions, but this study focuses on the manual distraction, which is focused on the driver's stance. This work aims to monitor the actions of the driver and look for signs of diversion. Distractions are divided into two groups in the model: safe driving and unsafe or distracted driving. For this purpose, various architectures of CNN can be used. This work, however, employs sequential architecture and achieved the highest observed accuracy of 99% with a total of 9.5M trainable parameters. The primary goal of this research is to classify a test image into two states of the driver that have been considered.

Image Recognition Using Deep Learning

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***Abstract*—** In the last few years, revolutionary neural networks have developed into state-of-the-art image recognition methods. In many of the image recognition datasets, they do better than human subjects. Most of the data sets depend on the concept of specific classes (i.e., images are classified by the type of object in the image).The deep learning models of image recognition are much superior in general object recognition competitions to the methods used before the appearance of deep learning.This paper deals with the identification of images through the deep neural network or the TensorFlow frame, also known as Deep Learning. Deep neural networks (DNN), since they provide a high

percentage of accuracy, are the best choice for the training phase. The model is simulated by the open fig-10 data set. The experimental findings demonstrate the high precision of the proposed algorithm.

Inference of Gene Regulatory Networks using Information Theoretic Measures and K-Means Clustering.

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[IACIT-2020-PID-615]

Abstract— Appearance of genes in the cells of an entity regulates its function and structure. Often, the activity of one nucleic acid influences the venture of a group of other nucleic acid ,Such linked nucleic acid form a gene regulatory network. Identifying the groups of genes that are co-regulated is an important task in bioinformatics. In the current study, we propose a approach using Correlation, Mutual Information and K-Means clustering for inference of gene regulatory network's from gene expression data. The results are differentiate with existing methods and show a quality execution.

Data Mining & Artificial Intelligence-VII

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IACIT-2021-PID-814

Automation Of Database Replication And Sentiment Analysis Of The Replicated Data

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***Abstract*—**The process of automation is continuously evolving across all the industries and more so in the IT industry, it increases the value of time and indirectly saves a lot on costs, and also on tasks that increase the value of your IT ecosystem exponentially. It also makes your day-to-day workload more interesting: learn, code, test, automate and learn something new. The databases need to have data from other databases for various purpose either partly or wholly, may be table, schema or database level. The replicated data may be useful for review and hence we may use sentiment analysis on the dataset using python and related tolls of ML. The data will be going through tokenizing, removing stop words, normalizing, vectorizing.

Smart Attendance Monitoring System Using Face Registering

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***Abstract*-** Face recognition is one of the main branch of biometric verification as the face is the identity of an individual and it is utilized by many organizations to mark attendance of employees. This project demonstrates a technique for attendance monitoring with facial recognition method by using two different algorithms one will be the existing algorithm such as Principal Component Analysis (PCA) algorithm and the other one is proposed by us which is UNCONSTRAINT FACE REGISTERING ALGORITHM . This method will automatically record the attendance of the scholars who are present in the classroom and it will also maintain a login and logout time of students and faculties and administration can easily access all the data of the students. However, it is difficult to estimate the outcome of facial recognition as most of the systems currently present have low detection rate and takes 20-100 images of a person for better identification. In this project attendance is marked by continuous observation which helps the system to improve and it also eliminates few features which affects the performance of the system that are different poses, light effects, partial occlusion etc. which helps the system to achieve better accuracy. This method will save approx 5-10 min of our valuable class time and can be used to interact or clear doubts with teachers.

The Importance of DataVisualization in Exploratory Data Analysis

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Abstract-Data analysis or data science is the most talked about and buzz world in recent time it is also the most research area. Exploratory data analysis also popularly known as EDA is a statistical method or process which helps you to get a better understanding of the data or dataset which you are working on. Exploratory data analysis is considered an essential process in any data science project life cycle. The better you understand your data the better report you will provide or you will able to build more robust and better models. The EDA is consists of several steps or is a process of several steps that you need to perform on your dataset. The data visualization technics help you a better representation of your data. There n-numbers of way to visualize your data. In this work, we are going to see the importance of data visualization in exploratory data analysis and the graphs you look for in any EDA. There are many paperwork and books available on exploratory data analysis and the steps involved in it. But here we will only try to focus on the different types of visualization techniques involved in the EDA. All the examples we going to see here are built by using python. There many tools available in the market to perform exploratory data analysis but in python where you write your own code to perform anything and python is widely used in the data science field.

Pneumonia detection using Chest X-ray Images

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Abstract- Pneumonia is one amongst the most happening diseases all around and requires proper diagnosis at an early stage. A huge number of children die every year due to pneumonia all over the world. According to the latest estimation Pneumonia kills more children than any other infectious disease, claiming the lives of over 8,00,000 children under the age of five. The image processing would help better for prior diagnosis of diseases such as cancer, pneumonia etc. Convolutional neural networks (CNN) are widely used in image processing. The diagnosis of pneumonia can be achieved by using the X-ray images of the chest. This diagnosis is done by considering the factor of having cloud kind of formation on X-ray image. Hence, artificial intelligence-based systems are required.

Sentiment Analysis to Improve Teaching and Learning

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ABSTRACT- Conceptual Sentimental analysis plays an important role in many fields including education, where student feedback is essential to assess the effectiveness of learning technologies. There are a few stages taken to lead this supposition investigation, which is to gather information utilizing libraries in python, text preparing, information, and text grouping utilizing the Naïve Bayes technique. The Naïve Bayes strategy is utilized for characterizing classes. This multi-disciplinary examination looks at the etymological attributes which impact correspondence and social connection on PC. Interceded correspondence.This paper uses the feedback of MOOC courses collected as the dataset to present the results. This paper starts by directing a subjective information investigation on gathering of graduate understudies taking on the web courses. Project considers singular understandable notes and examines their phonetic qualities. It takes a gander at the enthusiastic prompts, the utilization of verifiable, target language and other phonetic highlights. It proposes a technique for reasoning note of objectivity and has registered dependability testing of this strategy. It shows that there is a high connection between the utilization of target language in a note and the worth that understudies put on that note.

Kannada Text Detection in Scene Images using Image Processing

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Abstract— For content-based indexing and retrieval applications, text characters embedded in images are a rich source of information. Due to their different sizes, grayscale values, and complex backgrounds, these text characters are difficult to detect and recognize. The paper proposes a novel technique for detecting text of any grayscale value

embedded in images. The proposed scheme uses a combination of contrast-limited adaptive histogram equalization (CLAHE) algorithm, which enhances the local contrast and limits any noise in the image, and the wide baseline image matching technique which helps locate an object in the image. Applying a series of morphological operations and filtering at each stage, the resultant component is the detected text which is either a character, word or a line segment. MATLAB based simulation and evaluation on a self-curated Kannada, a popular south Indian language and other standard datasets proves that the proposed technique outperforms other methods consistently on precision, recall and F1-score. Importantly, on the Kannada dataset, it returns the highest recall of 98% since the system is specifically tuned for its linguistic features proving its robustness. Further, the proposed technique can be extended to image pre-processing tasks for deep learning models to improve their accuracy and for text recognition tasks.

Machine Learning

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IACIT-2021-PID-734

Sign Language Recognition Using Convolutional Neural Network

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Abstract: Communication is the way to express thoughts and emotions in life, key to share knowledge, real life experiences. Communication exists in different forms, sign language is one of them. It is a combination of hand movements and gestures which is a primary way of communication for speech and hearing impaired people. Normal people can easily communicate with each other, but people with speech and hearing impairment find it difficult to communicate with other people without a translator. When it comes to communication, understanding is must. But being an exquisite language it is not understood by all the people, that is why we need an approach which will help and improve the communication between people. Our proposed method aims to create a system that takes continuous gestures from video capturing device and translate the hand gesture to recognize the movements. Our proposed method consists of 4 stages – gathering images for dataset, training the model, testing of the model and finally recognizing the gestures using live camera feed.We could successfully detect 26 alphabets with an accuracy of 98.52% by training 1750 images per alphabet.

Supervised Machine Learning Models Based Prediction of Covid-19

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Abstract— The spread of COVID-19 in the entire world has put humankind in danger. The assets of probably the biggest economies are worried because of the enormous infectivity and contagiousness of this illness. The ability of machine learning algorithms to predict the number of possible COVID-19 patients is generally seen as a potential challenge to mankind. The undermining components of COVID-19 were determined using four normal estimating models: Support Vector Machine (SVM), least total shrinkage, and determination administrator (LASSO), linear regression (LR). Any one of the models makes three types of predictions, such as the number of newly infected occurrences, the number of passings, and the rate of recoveries, but they cannot predict the exact result for the patients. To defeat the issue, the Proposed strategy utilizing exponential smoothing (ES) The number of cases of COVID-19 and the impact of COVID-19 preventive steps including certain social insulation and latch on infectious diseases was expected in the next 30 days to come.

IT EMPLOYEE STRESS PREDICTION BY USING MACHINE LEARNING AND COMPUTER VISION TECHNIQUE

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Abstract—Stress assessment must be performed in early stages because stress related issues tend to rise in depression, heart attacks and strokes. Stress leads to have a greater impact on the thoughts sometimes provokes suicidal attempts

within employees. The machine learning techniques has proved to be extensive for medical analysis and prediction. This approach can further be used with neurological tools. The 2017 OSMI mental health survey dataset represents working professionals within the IT company and this dataset is used for classifying the stressed or unstressed employees. After data cleaning and pre-processing further training of model is performed by using machine learning techniques. The accuracy is predicted for both the models. Among those models boosting has given highest accuracy.

CONVERSATIONAL AI AGENT FOR EDUCATIONAL INSTITUTE USING NLU AND LSTM ALGORITHM

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***Abstract*—**Chabots are artificial intelligence-based software systems that imitate human communication (AI). It's designed to be the ultimate virtual assistant for entertainment, assisting with tasks like answering questions, getting driving instructions, turning up the thermostat in a smart house, and playing favorite music, among others. Chatbots are becoming increasingly common among companies due to their ability to minimize customer service costs and manage multiple users at once. However, to perform this many tasks we need our chatbot to be as efficient as possible here we are planning our chatbot to provide efficient and accurate answer for query based frequently asked questions by implementing Artificial Intelligence Markup Language (AIML) and Latent Semantic Analysis (LSA). AIML can be used to respond to template-based and general questions, such as welcome and greetings. Although LSA can be used to answer at any time for service-related questions, ensuring user satisfaction. Any university may use this chatbot to answer questions. Engaging curious students, this thesis contributes to the future research agenda of chatbots by assisting researchers in finding research gaps. Because of the advent of deep learning technology, the study identified a possible research opportunity in chatbots.

Predictive Analysis and Comparison of various Models on eSports Competitions

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***Abstract* —** eSports has emerged as a popular genre for players and viewers, promoting a global industry in entertainment. The study of eSports has grown to resolve the need for data driven feedback, which focuses on assessment, strategy, and prediction of cyber-athletes. The focus of this project is to create and compare various models to predict the likely winner for professional games based on the data recorded from various eSports tournament matches. Pro-games have the top industry and audience attention but are restricted in number. The project is dominant on Deep Learning and Machine Learning, where the predictions are made using the model that we will build. This project can play a big part in gauging which model is most suitable for predicting the results of a match.

MACHINE LEARNING BASED BREAST CANCER DETECTION USING LOGISTIC REGRESSION

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.[IACIT-2021-PID-723]

***Abstract*—** Breast cancer is a disease that affects people all over the world and can be fatal. On the other hand, if identified early enough, this deadly disease will save many lives .Radiologists use mammography images to determine the presence or absence of breast cancer. Machine learning techniques are used in bioinformatics, specifically for breast cancer diagnosis. This research tests the most widely used Supervised Machine Learning Algorithms with logistic regression and binary classification. In this analysis, the University of Wisconsin's Breast Cancer Data Set (BCD) is used to predict Breast Cancer. This dataset takes a number of factors into account when diagnosing the presence or absence of breast cancer, as well as the stage of the disease. Fine needle aspiration (FNA) is a surgical technique that is

used to locate the affected cells .Using the supervised machine learning algorithm, the proposed work achieved a best accuracy of 96.15 percent. As a result, our primary goal is to assist people in curing diseases at an early stage and allowing them to live peacefully.

Inferring gene regulatory network based on bayesian mean average method

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[IACIT-2021-PID-729]

Abstract— The reverse engineering of gene regulatory networks from gene expression data has sparked a lot of interest in the scientific community. Several models and methods have been developed to address various issues. However, these techniques are narrowly focused on specific biological and experimental platforms, and they necessitate experimental data that is frequently unavailable and difficult to obtain. The availability of higher-throughput sequencing data, in conjunction with more genetic perturbation, provides an opportunity to develop more comprehensive approaches for inferring gene regulatory networks. In this paper, we have proposed an algorithm using Euclidean distance and Bayesian mean average method with perturbed gene expression data for inference of gene regulatory networks. The proposed method has been compared with existing methods and the results show better performance of the proposed method.

Disease Prediction and Medicine Recommendation System

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[IACIT-2021-PID-734]

Abstract— Health and medicine has gained a lot of importance in today's digital world, where evolving technology is being used to fight against almost all the known diseases thoroughly. But, according to reports, more than two lakh people in China and one lakh in USA, die each year due to errors made while prescribing errors. Technologies such as data mining and recommending technologies make possibilities available to explore potential knowledge from diagnosis history records and help doctors to diagnose the ailment and prescribe medicines uprightly to decrease medication error effectively. This paper aims to propose a system which takes as input the symptoms from the patient to predict the disease, which is followed by recommending the correct medicine. This system consists of database system module, data preparation module, disease prediction module, medicine recommendation module, model evaluation and data visualization module. A Decision tree map and other classification algorithms are used to achieve this objective. This paper deals with the design and implementation of a system which performs the function of prediction of diseases and the recommendation of medicines, which adds to the capabilities of the present systems in health infrastructure.

Digital Image Processing & Sentiment Analysis-III

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Facial Emotion Recognition and Chatbot Model to Enhance the Emotion Detection Using Machine Learning

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***Abstract*—**One of the active areas of research trends is recognizing emotions in images. This project aims to identify facial emotions. The research concept in Emotion Recognition is included in the flow of our emotion recognition. These involve image acquisition, image pre-processing, face detection, feature extraction, and classification, with the machine being applied after the emotion have been classified. Our framework relies on already-existing still images. This project aims to improve automated facial emotion recognition and build interaction between the system and the user (bot).

AI CHESS GAME WITH VOICE COMMANDS

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[IACIT-2021-PID-755]

Abstract-The voice chess game is a simple game that plays based on the commands given by the player. Concurrently it is complicated to make decisions while moving the pieces. Voice-Controlled chess is designed for a person who cannot use their arms, due to their disability or if they are preoccupied with something else, perhaps they can deliver voice commands to play the game , Our goal is to provide better options for disables.This paper tells us how python libraries are used in chess games.Here the player has few options to choose the gaming menu, i.e. the player can choose to play the game using mouse clicks or using voice commands. Also the player can choose their opponents. The player can play against the AI nor the player can choose a play with another friend-player.If the player chooses to play against AI then the player can either play with the help of mouse clicks or voice commands.The player can either flip the board each time(the player plates)if the player opts to play against the friend player, or doesn't flip each time the player gets the turn**.**

Design and development of a safety system for Motorbike incorporated with artificial intelligence.

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[IACIT-2021-PID-756]

Abstract: One of the main reasons for death is caused by road accidents. Bike accidents have been profoundly expanding across numerous nations of the world. Hence, it is very essential to develop a system that detects and reduces some of the faults/mistakes usually a motorcyclist does. The advent of technology in the field of transport helps in reducing accidents by detecting the necessary things required for a safe journey like diver license, detecting the helmet, and drowsiness. There are machine learning algorithms that help to identify essential requirements for safety-drive.

Review On Algorithms, Theory Of Generative Adversarial Networks Applied To Constrained Image Synthesis

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[IACIT-2021-PID-757]

Abstract—In recent years, Image based (data driven) methodologies like Deep Learning and Computer Vision are more popular and precise in finding the features inside the image and generate realistic images. These give rise to Generative models like Variational Autoencoder and Generative Adversarial Networks (GAN). GANs play a major role in research as they translate images from one domain to another keeping structure aligned with input and generates realistic images as output. They are comprised of generator and discriminator networks trained in competition with each other to learn and generate distributions. There are many GAN algorithms proposed since 2014. GANs with different machine learning algorithms are used in many real-world applications. Very few comprehensive studies on GANs are available on different applications in literature. In this paper we try to give an insight on GANs in terms of theory and algorithms and also emphasize on review of applications of GAN in constrained image synthesis majorly image-to-image, text-to-image and sketch-to-image translation.

DDIHQ: Drug-Drug Interactions using Hybrid Quantum-Classical Optimization Neural Networks

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[IACIT-2021-PID-763]

Abstract—Of the many industries in which quantum computing is expected to have a reaching impact, drug manufacturing and production is one of the key industries. Quantum computing comes with the capabilities of enhancing production of drug manufacturing. Quantum computing influences the early stage of drug discovery and development. It will also have huge impact on the latest stages of Research and Developments. A great success rate in clinical trials can be seen using quantum computing. The drug manufacturing process is very expensive and certain drugs can take up to 10 -15 years to go to production stage. The success rate is less than 10% from clinical research to production. TensorFlow is very popular language used in deep learning frameworks, it has lot of inbuilt features to perform end to end deep learning techniques. A TensorFlow quantum framework which has the capabilities of Quantum Machine learning algorithms was used to create novel deep neural network algorithm the drug-drug interactions side effects interactions. A TensorFlow quantum framework which is built on top of C++ and was used to see the full potential of quantum classification algorithms.

Phishing Websites Detection and Evaluation using Machine Learning

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[IACIT-2021-PID-766]

Abstract— Data security has become a major issue as digitalization across the world is rapidly increasing. Personal information of the user is extracted and exploited using one of the cyber-attack known as phishing. To detect phishing, and to avoid the user from visiting a non-legitimate website, a method is proposed in this paper. This method uses unique features of Uniform Resource Locator which can differentiate between legitimate and non-legitimate websites. To classify websites, machine learning algorithms random forest and Support Vector Machines are used.

Convolution Neural Network Based Prediction for Eye Gaze Estimation

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[IACIT-2021-PID-769]

Abstract- Levels of progress in progress have truly made it possible to get various kinds of biometric information from individuals, enabling bases on assessment of human conditions in cure, auto prospering, advancing, and various zones. These evaluations have particularly featured eye improvement as a convincing marker with respect to human conditions, and assessment on its applications is adequately being pursued. The contraptions as of now for the most part used for assessing eye overhauls rely on the video-oculography (VOG) procedure, wherein the course of look is outlined by managing eye pictures crushed a camera. Applying convolutional neural network (ConvNet) to the getting ready of eye pictures has been seemed to enable exact and unprecedented look assessment. Ordinary picture overseeing, in any case, is begun on execution using a PC, making it difficult to finish consistent look. We hence propose another eye picture overseeing framework that cycles look assessment and event disclosure starting with one fulfillment then onto the accompanying using a self-governing engineered lightweight ConvNet. This paper evaluates the course of action of the proposed lightweight ConvNet, the frameworks for learning and appraisalused, and the proposed methodology's ability to meanwhile see look heading and eventoccasion using a truly unassuming memory and at lower computationalcomplex nature than standard ways of thinking.

Deep Learning Based Image Classification Using Small VGGNet Architecture

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[IACIT-2021-PID-771]

Abstract-One of the most interesting and important areas of computer vision is classification. Deep learning is important in image classification because it allows for the grouping of similar images. Certain adjustments to the images must be made before feeding them to the training model, such as normalization, image resizing, grey-scaling, and so on. Following image pre-processing, the next task is to extract features from the images, draw boxes around the objects in the image, and finally classify the images based on the detection of objects in the images. In a nutshell, classification is a simple task for humans but a difficult task for machines.In this case, we'll use the Small VGGNet (VGG– Visual Geometry Group) Architecture, which is a type of convolutional neural network, to classify images using deep learning. The qualified model is validated using three random images from Google. We experimented with scaling the image to different sizes. The deep learning model, which uses Small VGGNet architecture to focus on image classification, performed exceptionally well, correctly categorizing the images.Google Photos has already implemented image classification in their app, but uploading 1000s of images to the cloud requires a strong internet connection because computation is done on Google's server. The issue here is that if we are in a remote location, accessing the internet becomes difficult. Here, we will deploy a trained model with the application to make it easier to classify animals into different categories (the application with an inbuilt trained model does not require an internet connection). CNN's are a type of neural network that is extremely effective at image classification, object detection, and other computer vision tasks. To evaluate the accuracy of the model that we have trained, we will use an NVIDIA.

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IACIT-2021-PID-798
IACIT-2021-PID-802
IACIT-2021-PID-819

Human Activity Recognition Based on Deep Convolutional Neural Network

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Abstract- Human activity assertion in video is perhaps the most overall applied subjects in the field of picture and video arranging, with different applications in perception (security, sports, and so on), movement ID, video-content-based seeing, man-machine correspondence, and flourishing/handicap care. Development assertion is an amazing measure that a few difficulties. In this assessment, we propose a novel human development insistence methodology utilizing convolutional neural networks (CNN) and perceive the activity performed on that outline annals. Properly, this examination paper will give the required inspiration to seeing human activity possibly reliably (future work). This paper rotates around certification of direct Human improvement utilizing picture dealing with frameworks.

Identification Of Cyberbullying On Twitter Using Sentiment Analysis & Machine Learning

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[IACIT-2021-PID-773]

Abstract—Almost all social media platforms are rolling out the option of accessing their services in local languages. Being the first language of over 52 crore people, Hindi serves as an excellent medium for many to express their opinions on these forums. However, it also predisposes users to increased amounts of harsh comments, bullying, and threats. It can have indelible effects on a person's social image and mental health. Although much research has been done in other major languages, detecting cyberbullying in Hindi text is a challenge due to its changing dialects from place to place. Moreover, new slang terms are often made up on social media that did not exist before.Hence, as this is an immature field, we try to contribute by proposing a sentiment analysis approach that can help identify whether a text or a comment is bullying or not—the dataset generated from Twitter API by filtering the language in Hindi. A lot of effort was put into understanding and preprocessing the data and manual labeling done.We used the TF-IDF approach for choosing the bag of words from the dataset on which sentiment analysis was run. Four different algorithms, namely, Logistic Regression, Support Vector Machine, Random Forest Classifier, and LSTM, have been used, and the results were compared. Random Forest Classifier and LSTM gave the highest accuracy rate of 0.91 and 0.93

Handwritten Character Recognition with Convolutional Neural Networks

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[IACIT-2021-PID-776]

Abstract–In this day and age headway in complex logical strategies is stretching further the boundaries of human effort in different fields of innovation. One such field is character recognition. The paper will depict the best way to get over 90% precision in the field of Handwritten Character Recognition (HCR). There have been a lot of examination done in the field of HCR, yet it is an open issue as we are yet ailing in getting the best exactness. Various methods are accessible that include extraction and preparing of HCR frameworks, each with its own superiorities and shortcomings. By utilizing convolutional neural networks (CNN) we plan to accomplish a more significant level of precision with less pre-processing of information.

DETECTION OF PLANT DISEASE USING MACHINE LEARNING

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[IACIT-2020-PID-789]

Abstract- Detection of diseases in crops is an important aspect to deal with as it affects the productivity of the agricultural yield. The farmer may not realize that the crop is suffering from a disease by looking at the leaves. In this paper, we will be performing Convolutional Neural Networks (CNN) where data needs to be pre-processed: resize, rescale, convert labels into one-hot encoding vectors and split up the data into training and test sets. We will use the tomato leaves dataset to predict whether a tomato plant is healthy or diseased. Finally, we will be giving a user input image and using this model we will be detecting whether the plant is healthy or diseased and which disease it is suffering from which will help in enhancing the life of a farmer by increasing his productivity. Based on this detected information the farmer will be cautious if the plant is diseased and take appropriate actions.

Automatic Kidney Lesion Detection for CT Images Using Morphological CNN

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[IACIT-2020-PID-792]

Abstract—The CT scan is the best tool for diagnosing and finding injuries in the kidney. It can provide precise information about the location and size of lesions in many medical applications. Manual and traditional medical tests work and time consuming. The automatic detection of injuries in CT is now an integral task for clinical diagnosis. To develop and improve the efficiency of medical testing computer-aided diagnosis (CAD) is needed. However, the existing low accuracy and incomplete detection algorithm remains a tremendous challenge. The proposed lesion sensor is based on morphological cascade convolutional neural networks by using a multi-intersection threshold (IOU) (CNNs). To increase network stability and morphology co-detection layers and amended pyramid networks in the faster RCNN and combine four IOU threshing thresholds with cascade RCNNs. For better detection of small lesions (1-5 mm). In addition, The experiments have been conducted on CT deep-lesion kidney pictures published by photos and communication systems of hospitals (PACSs).

A Survey on Road Traffic Congestion Prediction and Recommender System

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[IACIT-2021-PID-798]

Abstract—Road traffic congestion can slow down the vehicles travelling on the road which increases travel time for the drivers and passengers, increases the fuel consumptions. Traffic depends on various factors such as Calendar of the week such as Week days or weekends, Periods of the day (morning, afternoon, evening, night), public holidays, Depending on seasons(summer, winter, rainy autumn), special occasions, periodical sports and social events, Road works and constructions, Traffic incidents, Traffic places such as Malls and parking nearby areas. In this paper, we have written an Android Application which is locating the vehicle in real-time using A-GPS and GPRS in the Android Phone. It generates a NMEA-0183 standard data which includes latitude, longitude, time, speed which can be extracted; and using reverse geo-coding address has been retrieved. There are other forms of data which also can be collected from Traffic flow sensors, Video Image processor, Environmental Data, Smart Card Data, and Social Network Data. Various parameters which we can apply prediction algorithms and analyse traffic flow, traffic density, average speed and travel time. Here we are applying various machine learning algorithms such as ANN (Artificial Neural Network) or autoregressive integrated moving average (ARIMA) to predict the traffic flow on long term prediction.

Voice-Based Email For Visually Challenged

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Abstract— Internet has made life of people so easy where people can access to any kind of information by just sitting at their homes. The foremost field that internet has covered is communication. When it is said communication based on internet, the first thing comes to everyone's mind is E-mail. These are known to be most dependable way of communication. Voice feedback established virtual environment such as, screen readers help visually challenged individual gain access to internet applications tremendously. The benefaction made in project has licensed blind to forward and accept Email messages. This system can be handed-down productively by visually impaired and unlettered persons since it is based on TTS-Text To Speech, STT-Speech To Text conversions and IVR-Interactive Voice Response technologies.

A Supervised Text classification approach based on variants of Naive Bayes and Gradient Ascent

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Abstract— Text data is growing exponentially, estimated to be about 2.5 million TB, a day. Approximately 80% of all of this data is estimated to be unstructured and free text. The text data presents very unique set of challenges during applying supervised learning approach. The challenges includes, preprocessing the text, extracting the impacting features from text based on context, training the model with the support of evidence, testing the model using the new instances of text document. In the present work, the traditional Naive Bayes and its variants (Multinomial, Bernoulli model) are used in estimating the initial weights of the features in classifying the sentiments. Later, Gradient ascent technique is used to estimate the exact weights of the attributes towards improving the likelihood of the classifier. The design of novel supervised text classifier mainly deals with extracting impactful features from text based on context. The outcome of the model improves the performance of the classifier in terms of classification accuracy. The findings of the present research work are in line with the literature review made from the period 2015 to 2019 in the area of sentiment analysis. The present work provides insightful information to the researcher in the field of Text Analytics.

Data Mining & Artificial Intelligence-IX

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IACIT-2021-PID-777

Covid-19 Prediction Using Human X-Rays Based On Convolutional Neural Network

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Abstract— COVID-19 is immensely serious illness brought about by Covid 2 (SARS-CoV-2), an extreme intense respiratory condition. It was found in December 2019 in Wuhan City, China, before spreading around the globe and turned into a pandemic. It has intensely affected everyday life, general well be in g and the world wide economy. Distinguishing the effective positive cases at the right time is significant in the treatment early. Detecting this virus requires large number of testing which is time consuming and any other automated toolkits are not currently available. X-ray images of the chest gathered from radiology imaging methods contain significant insights concerning the COVID-19 infection. Utilizing advanced technologies like artificial intelligence, deep learning methods on the radiological images provide exact analysis of the illness and can be useful in treating the patients in remote places where medical facilities are not immediately available. In the model that is being proposed, convolution neural network, is a deep learning method which is implemented to classify the person as Covid positive or negative by analyzing images of chest X-ray.

Fruit Ripeness Asseration Using Deep Learning

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Abstract—Agricultural sector is one of the most crucial sectors in the country by contributing in numerous domains. However, in comparison to other developing countries, some countries' farmers and agriculture fields have limited technology. As profitable businesses, whether public or private, large or small, seek to increase profitability while reducing costs, finding effective ways to accomplish these objectives is essential. This agricultural field is obviously a challenging field to the digital technology and this “smart fruit ripening assertion” model undoubtedly gives the high-quality and accurate results by utilizing the deep learning techniques such as YoloV3 which is a deep Convolutional Neural Network (CNN). This model's main focus is on the design and implementation of practical tasks, such as predicting the ripening stages of various types of fruits based on form, colour, and texture by combining and comparing various Machine Learning methods, OpenCV, and Internet of Things (IOT). The main intention of this model is to provide accurate prediction of ripening stages of the fruits by computer application which results in a lot of time saving and reduction of large-scale manpower.

Real-Time Anti Spoofing Face Detection With Mask Using CNN

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***Abstract*—**As COVID-19 spread the whole way across the world, a significant number of us got mindful of how significant face covers are. Medical services authorities and nearby foundations from one side of the planet to the other are encouraging individuals to wear masks, as it is the best way to forestall the transmission of the infection. Masks have without a doubt frustrated the facial-acknowledgment industry; the innovation has likewise adjusted. It might sound odd yet wearing a cover does not really prevent a PC from recognizing somebody. We are intending to prepare our model to recognize whether the pictures are genuine or fake one even though individuals are wearing face cover. In this paper, we intend to make a liveness detector equipped for spotting counterfeit faces. To make a liveness detector, we will prepare a deep learning neural network fit for recognizing genuine versus counterfeit appearances.It deals with two correlative spaces: RGB space and multi-scale Retinex (MSR) space. The RGB space contains the point-by-point facial surfaces, yet it is sensitive to illumination whereas the MSR pictures can adequately catch the high recurrence data, which is discriminative for face recognition.

Analysis of Knee Osteoarthritis

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***Abstract*--**Osteoarthritis (OA) of the Knee is a degenerative joint disease mainly caused due to loss of articular cartilages. The paper introduces an approach to quantify knee osteoarthritis (OA) severity using KL grades. This approach combines EDA (Exploratory Data Analysis), Pre-processing and Feature Engineering techniques. The amount of damage to the knee can be graded using KL scale (0-4). The automated detection of Knee Osteoarthritis (KOA) based on KL grades which corresponds to severity stages has been given in the paper. In the study public dataset from Osteoarthritis Initiative (OAI) has been used to evaluate the proposed approach with very promising results. Different accuracy metrices like F1 score, Receiver operating characteristic curve (ROC), Area Under Curve (AUC) and Precision were used to find the best algorithm amongst the classification models in Machine learning. Random forest and Decision trees algorithms were considered efficient giving an accuracy of 96.9% and 91.6% respectively. Our study is an economically better approach when compared to x-rays for OA detection.

Prediction of Prenatal Infants birth weight in Pregnancies

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[IACIT-2020-PID-630]

***Abstract*—** Both fetus and their mothers benefit from accurate fetal weight measurement. Low birth weight (LBW) and high birth weight (HBW) fetuses and mothers are linked to both short and long-term health consequences, such as a high perinatal mortality risk, various complications, and chronic disease later in life. Low fetal weight at birth is one of the most severe problems in maternity care, threatening the newborn's life and, in the worst-case scenario, resulting in death. This condition is to blame for the high rates of infant mortality seen in the globe. Artificial intelligence techniques, especially those based on machine learning (ML), could be able to predict fetal health issues early on. The state of one's health during pregnancy and at birth As a part of this paper calls for a study of various machine learning (ML) approaches for determining when a fetus will be born prematurely for its gestational age. The importance of detecting fetal growth defects early is dependent on the possibility of expanding the gestation period by timely intervention. There will be an increase in infant weight at birth, as well as a decrease in neonatal morbidity and mortality.

ANALYTICS OF PHISHING ATTACKS USING MACHINE LEARNING

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***Abstract*-** Cyber-attacks which is known as Computer Network Attack (CNA). It is a threat created by cybercriminals by more than one computer against networks. There are various types of cyberattacks among them Phishing Attack is one of them. Phishing is a technique of gathering sensitive information of a target such as username, password, bank

details etc. In this phishing attacks there are various types of phishing attacks among them URL PHISHING attack is one way to get users information. Mainly cyber-attackers create a fake website (URL) regarding (bank details, shopping websites, etc) using social engineering. Which looks like legitimate website (URL). This fake URL will be sent to user via email or some other resources. In this paper, we will be performing data analysis, data pre-processing, data exploring, training and predicting through machine learning techniques and optimization techniques on dataset which contains two attributes (URL, Label). We will be using performance metrices to know the performance of the model. Finally, we will be giving a user input URL and using this model we will be detecting this URL by giving information to the user whether this URL is legitimate or phishing URL. Based on this this detected information the user will be cautious regarding this URL whether to proceed with that URL or to not get into that URL.

Covid-19 Detection Using Deep Learning

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[IACIT-2021-PID-754]

Abstract—The COVID-19 pandemic continues to devastate the world since it came to the spotlight in December 2019. It is an illness that has very serious implications on the health and well being of the global population. It has posed a serious threat to the daily lives and the work of countless people around the world and detecting its presence is key to its treatment and reducing the number of people affected by it. The world has gone through many lockdowns throughout the spread of COVID-19 and the only way to stop the new variants and another wave of COVID is its detection and treatment. There have been many attempts by researchers to tackle these issues head-on, and a few prominent ways are swab test and radiography, specifically chest radiography, namely, CT scans and X-rays to analyze the image of lungs for the presence of COVID. While swab tests (RT-PCR) have been more commonly undergone, it is a very time consuming, laborious and complicated manual process, even the new Rapid RT-PCR takes at least 2-5 hours to get results. Studies have shown, patients suffering from COVID-19 have abnormalities in their chest cavity that can be detected by radiography. Normally, this would call for several radiology specialists and the whole process of manually inspecting each report is time consuming and challenging. This project will be using a convolutional neural network design tailored for the detection of COVID-19 by analyzing the X-Ray of patients which looks out for visual indicators found in the chest cavity of COVID-19 patients**.**

Facial Emotion Recognition usign CNN

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[IACIT-2021-PID-777]

Abstract **-** Nowadays where most of the works are being carried online the demand for face recognition technique is elevated. Computerized software is assisting in identifying human feelings such as happiness, sadness, anger, fear, disgust, etc. Over the decades, various research has been carried on the facial expression and emotion recognition. Emotion detection has extended applications. It is not merely related to any specific field nut instead the approach ranges from communication, advertising to hospital requisition and many more. To exist collective mechanisms through which we can accomplish the process of facial emotion recognition. In this paper we are using Convolutional Neural Network for the implementation. Upon exploring numerous datasets for the procedure of experiment we have chosen to go with Kaggle dataset.

IoT & Wireless Sensor Networks

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IACIT-2021-PID-608
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IACIT-2021-PID-656
IACIT-2021-PID-742
IACIT-2021-PID-744

Wearable Sign Language Detection System By Using Convolutional Neural Network

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Abstract— Being hearing or speech differently-abled may hinder the communication of an individual, thus the goal of the proposed approach is to reduce the communication gap between a differently-abled and a normal person. We aim to develop a hand Glove that can convert sign language to speech, as well as display text on an App. In addition, the App will also be able to do the reverse and convert speech into sign language. To create a complete sign language translator App that can translate sign language into speech and vice versa. The proposed approach is aimed to solve the problems faced by hearing and speech impaired people and enable better communication for them. It is implemented by using Arduino, Convolutional Neural Network (CNN) and Natural Language Processing(NLP). Arduino will be combined with various sensors like flex sensors to get motion data. The image recognizer will be made by the use of CNN in python using Keras. All these will be integrated into a Streamlit App created using the dart programming language.

Heart Disease Prediction Using Machine Learning Ensemble

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Abstract— Heart disease has risen to become one of the world's leading causes of death. Heart disease is also known as cardiovascular disease. One in four deaths in India are due to cardiovascular disease and stroke. Machine Learning has shown to be very effective in making decisions and predictions based on a large amount of data produced by the healthcare industry. According to the statistics provided from WHO, around 24% of deaths due to non-communicable disease in India are mainly caused by cardiovascular disease (CVD). Also, half of the deaths in the United States and other developed nation are mainly caused by heart disease. Every year, about 17 million people die from heart disease around the world, and this disease is particularly prevalent in Asia. Cleveland heart disease dataset was for evaluation of the system. Various combinations of features and many well-known classification methods are used to implement the prediction model.

Identifying Real and Fake Job Posting Using Machine Learning

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***Abstract*—** According to researches, there are around 188 million unemployed people around the globe. We may find many job vacancies on job portals and across the internet to help the job seekers. India alone has more than a hundred job portals. One major issue people face here is not knowing if the employer is real or fake. Most of these portals do not have a system that could check if the employer, posting a job is real or fake. Scammers are making use of this opportunity to post fake job offers which might look genuine to the job seekers applying for it. This way the poor job seekers might lose a large amount of money and time. A best possible solution for this problem would be that the job portal itself being able to identify if the job being posted is real or fake. This paper suggests using a machine learning model to achieve this goal. The idea here is to use natural language processing to understand and analyze the job posting and then making use of a machine learning model to predict if the job posting is real or fake. The first step is to import a dataset which has real life real and fake job posting. In this project, Employment Scam Aegean Dataset provided by University of Aegean Laboratory of Information and Communication system Security is being used. This dataset contains 18000 samples containing real life job postings. Various text cleaning techniques like lemmatization, stop words removal and special characters and punctuation removal is done on the data. Once the text data is processed, various algorithms like Random Forest, Linear SVC, Gradient Boosting Classifier, Gaussian naïve Bayes classifier and XGB classifier is used to test the performance of the model. The best two algorithms with respect to the percentage of accuracy with which the models could classify real and fake job posting was taken into consideration. Random Forest and Linear SVC could give accuracy close to 98%. Both of these algorithms were tuned using GridSearchCV , a library function which is a part of sklearn's model selection package. After tuning, the performance of both these algorithms increased and Linear SVC gave a better accuracy score of 99%. Hence Linear SVC is being used in this project for predicting real and fake job posting on a job portal.

AI Therapist

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***Abstract*—** Mental illnesses are usually in the domain of neurological disorders but unlike most, some can be treated, though not permanently, without the use of medication - this is where trained psychotherapists come in. Trained professionals have been studying and dissecting the understanding patterns and manipulative powers of humans for many years. This project harnesses the power of Natural Language Processing using pretrained models to understand and generate conversational text. Artificial Intelligence (AI) is expected to play an influential role in the mental health care of the future. AI has become a vast, interdisciplinary field that often intersects with counseling.In order to enable responsible clinical implementation, ethical and social implications of the increasing use of embodied AI in mental health need to be identified and addressed. Research in embodied artificial intelligence (AI) has increasing clinical relevance for therapeutic applications in mental health services.

Credit Card Scam Detection using Machine Learning

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[IACIT-2020-PID-623]

Abstract— Fraud by credit cards occurs sometimes, leading to massive financial losses. E-commerce and many other online payment methods have been expanded and a huge share of these transactions is a higher risk to online fraud and credit card transactions. With and the importance of data science, along with machine learning, these problems can be solved. This paper aims to demonstrate the modeling of a data set using Credit Card Scam Detection machine learning. The problem of credit card scam detection includes modeling previous transactions of the card with the data from those which proved to be fraudulent and zero which proved not fraudulent.

Pothole detection using CNN, OpenCv and Keras backed by Tensorflow

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Abstract—Potholes have proven to be a major roadblock in recent times. Potholes are one of the leading causes of car accidents and other untoward incidents on the road, and they also cause vehicle wear and tear. The collected data is currently being processed in order to determine road faults and work on them.Data collection is almost fully automated thanks to a variety of imaging systems, but the evaluation of defects based on the collected data is still performed manually and is not automated even today. This method of classifying and evaluating potholes is expensive, time-consuming, labor-intensive, and repetitive, and it inevitably slows down the overall road maintenance process. We have described a new method for detection of the potholes in this paper . Convolutional neural networks (CNN) have been used. Using this approach in the proposed system, input images were classified into two categories. Implementation was done using OpenCV library in Python. It was trained on 722 raw images and tested on 198 images, with precision, correctness, and recall metrics among the metrics used to assess the results.

Certain Investigations of prediction on Stock trend using various Optimization Techniques

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***Abstract*—**A stock price represents a company's value at any given point, trends of the same will be very volatile because of different trading activities, supply and demand of stocks, and companies' financial outcomes. Predicting the correlation between price, time, and various other variables in any stock trend is an essential need for portfolio optimization. The model of LSTM(Long Short Term Memory) recurrent neural networks (RNN) is the optimal prediction method, with LSTM used for understanding temporal dependencies, which is well known for processing and understanding continuous data points, The above model gives structural integrity to most of the time-series data analysis. The stock market produces a vast amount of data, there will be fluctuation of prices every second, so training Neural Networks for an enormous amount of data takes extensive time, We are performing certain investigations on boosting the accuracy and reducing the time taken to train by further enhancing the above-given model, with modified versions of Adam, RMSProp, and AdaGrad optimization methods.

Recognition of Sign Language using Deep Neural Network

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***Abstract*—**Speech impairment affects an individual's ability to communicate. People affected by this problem, suffer by the communication barrier with the normal people. Hence, to express their emotions and thoughts people will use sign language for their communication and. Although sign language is common in world, there may be a difficulty for people who do not have knowledge about sign language to communicate with speech impaired people who knows the sign language. Now there is a prominent growth in the field of computer vision and deep learning, which has been tremendous development in the fields of sign and motion recognition. The proposed model focusses on overcoming the challenges in verbal communication between non-sign language speakers and sign language speakers by building a deep learning model to recognize alphabets of American Sign Language. The model was trained on the dataset collected from Kaggle website which consisted of 26 American Sign Language alphabets. The model achieved 99.3% mean average precision in recognition of sign and average probability value for test image achieved was 0.99. The deep learning method used to build the model achieved more accuracy than the previous solutions.

Data Mining & Artificial Intelligence-X

IACIT-2021-PID-533
IACIT-2021-PID-547
IACIT-2021-PID-579
IACIT-2021-PID-585
IACIT-2021-PID-668
IACIT-2021-PID-812

Smart Waste Management System

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[IACIT-2021-PID-533]

Abstract— This Waste management is one of the serious challenges in the cities, the system now in counties, we continue to use an old and outmoded paradigm that no longer serves the entail of municipalities, Still find overspilled waste containers giving off irritating smells causing serious health issues and atmosphere impairment. The Smart Waste Management System will simplify, with the IoT (Internet of Things), Web applications and mobile phone, the solid and hydric waste inspecting process, and the management system of this presentation's total collection process. The proposed system is GPS and RFID/SENSORS based. The suggested device and implementation will track waste storage and monitor the vehicle's waste driver. This method helps to make the customer aware of accountability behind the job such as the system for solid waste inspection and management, integrating communications technology for truck control systems such as RFID/SENSORS GPS and GIS.

Smart Automated Parking System using RFID

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Abstract—The developing urbanization joined by progressively clogged metropolitan spaces and tremendous development in the quantity of metropolitan vehicles, has brought about therequirement for secure parking spots in schools,malls organizations etc. With advanced technolgies and low cost smart devices to inline with the smart cities mission to improve the economic growth as well as to improve the quality of people life in this paper, we made an attempt to utilize the technology in an innovative way for secure smart parking without human intervention. The proposed framework includes gadgets such as RFID readers and labels, servo motor as an entryway, PCs, Software and LED lights. This framework is utilized for controlling working boundaries and sparkling LEDs in various purposes. This proposed design is compatible with any kind of environment. The proposed system enables only the authorized member to access the parking spaces. The proposed system also includes NodeMCU which is an open source IOT platform which plays important role in transferring data. When the vehicle is read by the RFID scanner, the NodeMCU sends the information about slot vacancy and a slot will be allotted to the user by the Arduino micro-controller and that will be displayed on the LCD Sccreen. This framework can forestall burglary of the vehicle in the school. Individuals from the Members of the system including students can have a sense of safety for their vehicles. Automated entry, exit management system for registered vehicle users will also enables safety of indicvidual users vehicle.

Solar Driven Agribot for farm irrigation

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Abstract-Agriculture accounts for a significant portion of India's GDP. Water shortages and high labour costs are two big challenges in modern agriculture. These problems can be solved by agriculture task automation, which promotes precision farming. In light of India's abundant sunlight, this paper discusses the design and creation of a solar-powered IoT-based Agribot that automates irrigation tasks and allows for remote farm monitoring. An Arduino microcontroller is used to create the Agribot. When it's not irrigating, it collects solar energy. It travels along a pre-determined path of a farm when performing irrigation, sensing soil moisture content and temperature at regular intervals. Data from multiple sensors is processed locally at each sensing point to determine the need for irrigation, and the farm is watered accordingly. Agribot also functions as an IoT system, transmitting data from multiple sensors to a remote server through a Wi-Fi connection. Raw data is processed at the remote server using signal processing operations like filtering, compression, and prediction. As a result, according to the user's request, the analysed data statistics are presented using an interactive interface.

Fire Detector And Extinguisher Robot With Alerting Mechanism

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***Abstract*—** Putting off fire when it spreads rapidly might be very dangerous and risky. Here, we propose the automatic fire sensing andextinguishing using Robotics. It provides a safer way to extinguish fire since there is no human involvement required other than deploying the robot when there is a fire. The system is implemented using the Arduino Board which has the Atmega Microcontroller for processing. It also uses fire sensors to detect the fire. The information that there is a fire is passed on to the microcontroller, which processes what is to be done and sends that information to the control circuitry that helps in the movement of the Robot. The robot then moves in either the forward, backward, left or right direction, towards the fire and extinguishes the fire by using a water pump or a fire extinguisher. It also gives an alarming sound when it senses fire that alerts people and helps them evacuate the place immediately. This system is especially helpful when the fire spreads at an alarming rate in a closed space and the involvement of humans to extinguish the fire could be a great risk to them, whereas, using a Robot made with fireproof technology can make this job much less risky.

IOT BASED SOLAR POWERED IRRIGATION SYSTEM AND FARM MONITORING

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[IACIT-2020-PID-668]

Abstract— The Internet Of Things(IOT) is a network of physical objects or 'objects' embedded with computers, software, sensors, and network communication that allows the capturing and sharing of data by these objects. Agriculture/Horticulture assumes a significant part in indian economy. But the problem faced in farming are water deficiency and high costs. These issues can be resolved using new system called smart automated irrigation system. Because this system has 3 different sensors like temperature, soil moisture and luminosity. These sensor senses the soil level when moisture of the soil is less than the expected level, the water is pumped to the crop to make it moisture.

IOT BASED ROBOT SYSTEM FOR HUMAN DETECTION DURING DISASTER

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Abstract--Natural mishaps such as earthquakes, debris, floods, tsunami, avalanche and man-made mishaps such as explosive blasts, building breakdowns happen over and over again. These calamities abruptly occur and have very little

means to prevent and have no pattern of occurrence to predict. Though we cannot prevent it, the idea of intelligent rescue processes in these tough times would help saving life and material. Many a time, human bodies are buried in the middle of the debris and it turns out to be difficult to identify them. Manual rescue detection with the police force, firefighters and associated medical amenities is laborious and takes lots of time. Putting their life at stake, these human rescuers should make judgments in haste under stress and put efforts to identify and rescue the victims. They need to figure out the place, position of preys and the firmness of the constructions at the earliest, subsequently that medics and firefighters reach the calamity location and protect the victims. Our paper proposes an intelligent mobile robot that can travel in an area susceptible to calamity to detect alive people and perform rescue operations using a Passive Infra-Red (PIR) sensor. Radio Frequency Identification Tag Reader is used to read the RFID number, LM35 temperature sensor to sense the surrounding temperature and GSM technology is used to connect the android.

High Performance Computing and Networks

IACIT-2021-PID-563
IACIT-2021-PID-635
IACIT-2021-PID-784
IACIT-2021-PID-787
IACIT-2021-PID-807
IACIT-2021-PID-818

A Modified User Based Collaborative Filtering Approach For Personalized Clothing Application

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Abstract—With the advent of technology, various clothing recommendation applications are common these days. However, these applications differ in many ways in terms of datasets and algorithms, etc. In this research work, we proposed the modified collaborative filtering algorithm based on clothing recommendations. By improving the nearest neighbor formula by adding user's characteristics when calculating the similarity. Traditional User collaborative filtering predicts the recommend cloth designs by taking the average ratings between pairs of users and cloth designs. In the practice of large datasets of user ratings, the accuracy and stability of user collaborative filtering tend to be decreasing. Conducting the experimental results illustrated that the modified user-based collaborative filtering approach can effectively increase the accuracy and stability to achieve better recommendation results.

Secure And Verifable Access Control Scheme For Data Security

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Abstract— Cloud computing which provide compact and benefit approach to give information for allocate that gives varied edges to every culture and folks. Naturally it exist the resistance directly to supply the allotted information for cloud server and usually it can vary the valuable data. Storage is important for the position that will be cryptographically emphasizing the obtained management to the allotted information. Identity based secret writing also send a crypto logical that has the earliest form wise information to allocating system. Getting to administration isn't steady i.e., once authorization is terminated then we ought to be compelled to be component may subtract his/her from the framework. Here, the disavowed client cannot allow each distributed data to past and ensuing way. We have got a bent notion to propose a reference to revocable storage identity- based secret writing (RS-IBE), it can share the security onwards and reverse cipher text to decrypting the functionalities for user relocate the cipher text that can be update to a similar time. What is more, we have got a bent concrete for giving data to cloud server. The actual comparisons that involve the projection on RS-IBE have positive terms to utility and capable. It is feasible for wise and economical knowledge that allocate into the system. Finally; it provides a result which is implemented to project the theme that is demonstrated to usefulness. Identity-Based secret writing (IBE). It rearranges the ultimate open key and it is overseen with the certificate

called Public Key Framework (PKI) might be compelling the distinctive open key to mystery composing. Thus, we have to be give full comes about that are exploratory to illustrate the anticipated productivity to built data to the cloud.

Automobile Parts Management System - A Novel Strategy for Your Automobile

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[IACIT-2021-PID-784]

***Abstract*—**The Our Project Mainly Focuses on Providing an Opportunity to the local vendors to sell their products online through our e-commerce site. We are going to Collect Data on the Spare Parts available in his shop along with the price and Manufacturing Date with the Cost and enter that into our database for the Customers to view in our platform. There will be a unique concept in our app where the Customer Can See the Price Comparison, Seller information, and availability of the Spare part nearby his Localities. So, that he can directly go there and get the product which saves his Shipping Cost and waiting time for the product to reach him. The Customer can pay through various gateways like UPI, BHIM, Credit / Debit Card, Cash on delivery, Coupons... Which leads to a hassle-free transaction for both customer and Seller. We also provide a return policy based on the Spare parts we Sell, As Few Spare Parts are Non-reusable. The concept of this app is to decrease the struggle of people while the need to service their car. In these modern days, everything is digitalized to make life simple. In this app, we will link the customer and the dealer. This research project provides the specifications and requirements for modern automobiles app using the android platform.

A New Hybrid Diffie-Hellman and Caesar Cipher Algorithm for Cryptography

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[IACIT-2021-PID-787]

Abstract— Caesar's cipher algorithm is one of the ancient algorithms in the world. However, due to advances in technology the algorithm is now much simple to breach. This is because; each letter in the message is replaced by the same letter as specified. To raise the safety, some changes can be made. So, an arithmetic algorithm is proposed here namely Diffie - Hellman's key exchange. The Diffie - Hellman's mode of changing the key is used to find the secret key first and then use simple calculations to verify data encryption. After obtaining a private shared key using the Diffie-Hellman method, depending on the operating mode with 26 keys to get the value of 26 or less, then the present character is taken with the key along with the additional value of the new character. In any letter in the position of an 'x', the key first increases with an 'x' and is adjusted to get the encrypted letter. Therefore, 2 messages are repeated 2 times and the third letter has 3. This increases safety. This technology can be used to securely transfer sensitive information from one person to another.

Review on ACO-HSA with MPLS-MANET

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[IACIT-2021-PID-807]

***Abstract* -** Mobile ad hoc networks (MANETs) easy to use because MANET has the set of nodes that are moved randomly within the network which is infrastructure less. Multi-Protocol Label Switching (MPLS) is developed in the MANET to manage the dynamic topology of the network. The network performances are affected due to the higher energy consumption of the nodes. In this work Ant Colony Optimization (ACO) and Harmony Search Algorithm (HSA) is used to discover optimal path. Three different parameters are considered in the fitness function such as residual energy, distance and number of hops. So, this ACO-HSA methodology is used to select the optimal path to reduce the energy consumption in the network data transfer. The performance of the ACO-HSA methodology is compared with

existing routing protocol. In this proposed work we have focused only on residual energy is increased compared to existing work.

Outbreak of Glacier in Antarctica: Movement Analysis using Remote Sensing Data

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Abstract-Outbreak of Glacier displacement is cause of crisis environmental change. This paper proposed Glacier raze due to high impact of tsunami wave in Tohuku have triggered to continue giant hit on Sulzberger ice shelf of Antarctica. Synthetic aperture radar (SAR) satellites used for regular tracking system to monitor the disaster effects. SAR is atmospheric convenience system could work in all weather conditions. The bounce of electromagnetic signals collects multiplicative noise named as speckle and is in need to reduce. The image processing tool helps to analyze remote sensing images. Two temporal images are implemented to find iceberg movement difference using un-decimated discrete wavelet transform. Difference images are segmented by two-level clustering method to differentiate class distribution. This experiment provides prominent accuracy of 97.77% and showed precise glacier movement with perfect boundaries of broken pieces.

Data Mining & Artificial Intelligence-XI

IACIT-2021-PID-571
IACIT-2021-PID-697
IACIT-2021-PID-706
IACIT-2021-PID-746
IACIT-2021-PID-762
IACIT-2021-PID-806
IACIT-2021-PID-786

LSTM-Based Air Quality Prediction

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Abstract— In this project we are using Neural networks and Long Short-Term Memory (LSTM) to address the air pollution detection. As each living organism needs fresh and good quality air for every moment, very few of the living things can survive without such air. Increasing industry and populace have end up fundamental contributor for the air pollutants. Over the time, many countries are finding numerous approach of fighting towards air pollution. The air we breathe every moment causes several health hazards. Sowe'd like an honest system that predicts such pollutions and is useful in better environment. It leads us to address the advance techniques for predicting the pollution using Air Quality Index. So, here we are predicting air pollution using LSTM and Neural Network techniques for the coming hour mainly on pollutants like ammonia(NH3),lead(Pb),ozone(O3),carbon monoxide(CO), nitrogen dioxide(NO2), sulphur dioxide(SO2) and ecosystem aspects inclusive of temperature, strain, rainfall, wind pace according to minute and wind direction.

Continuous Emotion Recognition from Facial Expressions Using CNN Architecture

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[IACIT-2020-PID-697]

Abstract— Feeling might be a hot subject in a very kind of regions, just as medication designing, brain research, neurobiology, and wellness. feeling recognition may help inside the diagnosing of mental and social issues. Profound learning has made significant advances inside the space of picture acknowledgment lately. during this paper, we have an inclination to propose a LeNet configuration upheld Convolutional Neural Networks (CNNs) for biometric verification. first of all, we have an inclination to coordinated three datasets (JAFFE, KDEF and our custom dataset) (JAFFE, KDEF and our custom dataset). At that point we have a propensity to prepared our LeNet plan for feeling states grouping. during this examination, we have an inclination to accomplished a characterization exactness of ninety six.43 p.c and an approval precision of ninety one.81 p.c exploitation looks to order seven totally various feelings.

Comparative study and analysis on Multi-class classification using Naïve Bayesian approach & Support Vector Machine

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***Abstract*—** In Machine Learning, there are three main types of learning, namely Supervised Learning, Unsupervised Learning and Reinforcement Learning. In this paper, we have proposed the comparative study of two efficient supervised learning classifiers namely Support Vector Machine (SVM) and Naive Bayesian Approach. The main objective is to analyze the data and generate models using statistics and machine learning and compare the performances of these approaches and find the model with the higher result. Multi-class classifiers are built for categorizing datasets having more than 2 classes. Within this paper, we'll consider supervised learning techniques namely SVM and Naïve Bayes Approach and predict the target and showcase the one that produces better result. The datasets used are iris, wine and glass datasets from UCI repository for Classification. All the datasets chosen are Multi class or Multi label datasets. To increase the quality of the classification and the model accuracy we have used wrapper method i.e K-Fold Cross Validation and other feature selection methods. The multi-class SVM out performed Naive Bayes approach.

Licence Plate Detection Using Machine Learning

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***Abstract*—**License Plate Recognition (LPR) has always been a tough task in the field of computer vision. Although it has been around for quite a while, there still lies the challenges when we have to deal with; the harsh environmental conditions like snowy, rainfall, windy, low light conditions etc. as well as the condition of the plates which includes the bent, rotated, broken plates. The performance of the recognition and detection frameworks take a significant hit when it is concerned with these conditional effects on the license plate. In this paper, we propose a model to improve our accuracy in these conditions based on the Chinese Car Parking Dataset (CCPD) using 2 separate convolutional neural networks. The first CNN will be able to detect the bounding boxes for the license plate detection using Non-Maximus Suppression (NMS) to find the most probable bounding area whereas the second one will take these bounding boxes and use the spatial attenuation network and character recognition model to successfully recognize the license plate. First, we train the CNN to detect the license plates, then use the second CNN to recognize the characters. The overall recognition accuracy was found to be 89% in the CCPD dataset.

Xception:Facial Expression Detection using Deep Learning Techniques

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[IACIT-2021-PID-762]

Abstract—This paper demonstrates an Emotion detection of a person using Xception model. The algorithm proposed here uses three different stages: Entry stage, Middle stage, and exit stage. Data enters in the first stage, and processing is done in the second stage. Later the output has been presented by integrating the model with the flask environment. Different graphs are presented on the website to show the percentage of emotion detected on the face. Here the state of the artXception model architecture explores the best possible ways to see expressions of humans. The proposed model is developed using deep learning techniques, which uses separable and point-wise CNN. The model achieves an accuracy of 87%.

Automated Monitoring And Attendance Based On ML Using Face Recognition

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[IACIT-2021-PID-806]

***Abstract*—** In this paper we propose a computerized participation the executives framework. This system, which uses simple and advanced machine learning algorithms that works on face detection (Haarcascade classifier) and recognizes

faces using LBPH algorithm, this naturally identifies when the understudy goes into the homeroom and imprints the participation by remembering him. Various ceaseless circumstances are considered to assess the presentation of different face assertion structures. This endeavor furthermore proposes the methodologies to be used to manage the threats like mocking. When wandered from standard interest showing this framework saves the time and additionally assists with seeing the understudies.

Canine Breed Identification Using Machine Learning On AndroidmyPUP: A Dog experience App

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[IACIT-2021-PID-786]

***Abstract*—**Dogs are one of the liveliest and most adored creatures globally but planning to adopt a dog comes with some challenges, such as choosing the right breed for the user, choosing a diet plan, suitable vaccinations, training, and medical needs. To overcome these problems, we have come up with an idea of "myPUP: a dog-oriented application" which uses the likes of Machine learning and Android app development, and with Convolutional Neural Networks, we will form a dog breed identification system to predict the right breed for you, provide breed-specific details like diet, vaccinations, training, and healthcare tips. It also comes with a feature named dog helpline, which predicts the dog's health according to their behaviour, and a dog scanner that examines the purity of the dog.

IoT & HealthCare

IACIT-2021-PID-520
IACIT-2021-PID-555
IACIT-2021-PID-624
IACIT-2021-PID-700
IACIT-2021-PID-703
IACIT-2021-PID-796

A comparative analysis to measure the success of students using data mining methods

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Abstract—Significant presentation connected with educational data processing tools offers educational decision-makers in educational institutions the chance to enhance the accuracy of forecasting student academic success. Educational data processing methods are wont to investigate knowledge associated with the tutorial field. Predicting student success so as to form improvements in educational outcomes is one among the foremost pressing goals of educational study. The aim of this field's research is to get techniques for improving prediction which will be wont to make a prediction. The target related to such overview is to examine how data processing has been drawn nearer by scientists previously and therefore the latest patterns in information mining in instructive examination, even as to survey the probability of instructive information mining approaches within the field of coaching . This paper additionally plans to embrace a conscious composing study to line up strategies and procedures for foreseeing student's triumph utilizing data processing methods.

Identifying Risk Using Health Sensors With The Help Of IOT And Machine Learning

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Abstract—In the recent years iot has been gaining lot of attention because of its capability to reduce the difficulties in the healthcare system. The health care system has been in lot of stress due to the increasing number of chronic diseases and the increasing population. there are lot of issues in this area which in to be studied with high priority, but all theses study has been limited by the not maintaining standards in the health care. In order to solve this problem in this paper we propose a standard model which can be applied in the helath care system using IOT. In this paper we listed out researches which have we done in health care area using the state of the art. We have also listed their capabilities, weakness and overall conditions for a wearable IOT healthcare system.

Stock market analysis and prediction using ML

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Abstract— Seventy-Five percentage of Business pioneers state 'development' as the key wellspring of significant worth from investigation yet Just sixty percentage of these pioneers have prescient exam abilities.. The solution to this is applying the correct arrangements of applications, which can work on huge bits of information. Machine Learning Calculations are major application which makes it possible.
The place of this task is to break down through different expecting techniques to anticipate future stock benefits dependent on past data returns to build up a game plan of various stocks to know the varieties in the outcomes. We are doing this by applying machine learning strategy to determine stock value and provide the users with a better prediction and assist them with proper stock investments on web.

YOLO (YOU ONLY LOOKONCE) OBJECTDETECTION

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Abstract- In this paper, we will see the detection of multiple objects. The model will detect objects in real- time using the machine's web camera. The model can also run on a machine of low configurations. There are many algorithms for detection such as (1) Faster R-CNN (2) Fast R-CNN (3) R-CNN (4) R-FCN (5) Single-shot detection [SSD] (6) Histogram of Oriented Gradients [HOG] (7) Spatial Pyramid Pooling (SPP NET) and many more. We will be using YOU ONLY LOOK ONCE abbreviated as YOLO. The model will detect multiple objects and will show a bounding box around each detected object along with voice output that will pronounce the name of all the objects detected by the algorithm. It will also recognize the location of the objects captured by the camera such as mid-right, mid- left, top-left, top-right, mid-center, bottom-right, bottom- left, etc.

Customer Segmentation using Minibatch K-means

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[IACIT-2021-PID-703]

Abstract— In business field, customers are very important part of it. Regardless of the sales one cannot improve his business and this sale is dependent on customers. Customer Segmentation is essential method to fulfil this agenda to improve business. In this paper Minibatch K-means is used to segment the customers through clusterization. Later the analysis is done and marketing strategies are applied accordingly.

Weapon Detection

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[IACIT-2021-PID-796]

Abstract—Considering today's world, there is major need of automated public monitoring for weapon detection. The main goal of this project is to identify the prohibited devices such as weapons through the built-in security cameras. Using YOLOv3 algorithm and the trained datasets the program is executed. We have used camera to detect the weapons and the detectors performance was well to detect the weapons. It provides faster speed. It is an application that can be installed in different places where security maintenance need is high such as Banks, Shopping malls, Airports, Railway stations, Museums, etc.

Educational Systems Design & Web-based Learning

IACIT-2021-PID-561
IACIT-2021-PID-616
IACIT-2021-PID-620
IACIT-2021-PID-713
IACIT-2021-PID-730
IACIT-2021-PID-738
IACIT-2021-PID-760

Real Time Driver Fatigue Detection Using Convolutional Neural Networks Approach

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***Abstract*—** This project deals with driver drowsiness detection in real time. Detecting the driver's drowsiness behind the wheel then alerting him may reduce road accidents. Drowsiness in this case is captured using an auto camera of laptop, whereby, based on the captured image in real time, the neural network recognizes whether the driver is awake or tired and also images are trained and test the dataset of the detection of driver drowsiness. The convolutional neural network (CNN) technology has been used as a component of a neural network, first, we analyse methods of image segmentation, and develop a model based on convolutional neural networks. main features considered are eye aspect ratio, mouth aspect ratio, pupil circularity and mouth over eye aspect ratio and system detects where the driver is drowsy or not and if drowsy alert sound is given.

Age And Gender Classification Using Convolutional Neural Network (CNN) In Deep Learning

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***Abstract*—** In this automatic age and gender classification is an real world application . humans are capable of decide an separate gender and age relatively using face attributes. Using CNN to design a real-time facial images. Earlier the some of technologies are developed but this technology is new now a days .this result contain output of both global and local network.in this method using OIU-audience bench mark trained data set .using the data set have to create and build a model of CNN network architecture.

Super Resolution CNN Algorithm To Improve The Quality Of Degraded Images

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***Abstract*—**Huge information carries advantages to numerous territories of logical exploration, anyway handling these a lot of information regularly requires broad registering time and a huge extra room. Super Resolution project, thinks about critical areas, and accordingly proposes another super goal approach that utilizes huge and wide-ranging data under the structure of a CNN. The preparation interaction is accomplished for the huge pieces of informational

collection, reproduction cycle which are been considered critical parts independently. The focal point of Super Resolution is to create a higher goal picture from lower goal pictures.

Survey On Predicting the COVID-19 Cases

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[IACIT-2021-PID-713]

***Abstract*—** COVID-19 is a disease which is caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will be experience mild to moderate respiratory illness and recover without requiring special treatment. Covid-19 has a strong impact among various people in real life and social media. People have different sentiments regarding the Covid-19 disease. Various techniques are used to identify the status (positive or negative) of people. Techniques such as Convolutional Neural Network, Forward Chaining, etc are used to identify the status of Covid-19 among people. Datasets such as Emolux, COVIDSENTI, CT Scan Images dataset, etc consists of 8, 90,000, 1824 dataset respectively were used in existing systems. After the Survey is done, a system is implemented for the Sentimental Analysis of COVID-19 tweets using the TwitterAPI. The results shows the classification of the tweets into the Score column which includes three categories, Positive, Neutral and Nergative tweets. This result is displayed using graphical representation of the Score which can be obtained by calculating Subjectivity and Polarity of a sentence. At the end a word cloud will display the frequency of the words that are used inside the tweets. Data from the various websites can be used in the future for more wide sentimental analysis.

Object Detection Using OpenCV

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[IACIT-2021-PID-730]

***Abstract*—** Object detection has become more attractive for its wide range of applications. It is a computer vision technique that helps us to identify an image or an a video. In this project we detect the object by using SSD algorithm, there are several algorithms like CNN, R-CNN and etc. This algorithm performs efficiently and also it is less complex than compared to other algorithm. Object detection can also use count the object in an image.

A COMPARATIVE ANALYSIS OF ALGORITHM FOR DETECTING CONCEPT-DRIFT

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[IACIT-2020-PID-738]

***Abstract*--**In these day's social media has become more popular. Many people are using social networking sites like Twitter, LinkedIn , Google+, Facebook etc., to be connect throughout the world for communicate with the families, business use or both. Among this Social Medias Twitter is one of the most popular social media people are using these days. They all collect huge amount of data day by day and serve as the source of Big Data analysis. In the Social media like Twitter there is always a drastic change in the trending topics depending on many parameters this is called concept drift. There is a mechanism or model to identify this concept drift so that we can find out what is the span of the trending tweets. In order to come out with the solution for this, we have organized one work as objectives: Collection of tweets, identifying the trending tweets, Algorithms to identify concept drift are ADWIN and Page-Hinkley test is used in this work and Comparative analysis of algorithms is done. We got the accuracy of 83.24% and 80.06% on ADWIN algorithm and Page-Hinkley test algorithm respectively.

Sentiment Analysis of Covid-19 Tweets using Machine Learning and Natural Language Processing

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[IACIT-2021-PID-760]

Abstract—Throughout the COVID-19 pandemic, social media has been flooded with dozens of important details that could illuminate the world. Twitter is a good community based on Natural Language Processing (NLP) strategies. In this work, main aim is to reflect the situation in the United States during the COVID-19 epidemic. Epidemics have become more prevalent in the region. Some states had large opposition in the past or were delayed in the event of standards, for example. Countries differed in the timeline for the establishment and enforcement of home occupation policies. Sentiment analysis isdone via TextBlob, determining the magnitude of the tweets in the spectrum of good and bad. TextBlobis quite popular Python library used for the task of data processing. It has the feature of a simple API to share common language processing functions such as marking in speech, coding, sentiment analysis, separation, translation etc. Marked details from these tweets form a visible timeline of global sentiment COVID-19. opens the way for us tolookatthepublicreactiontoeventscausedbytheepidemic.

Emerging Trends

IACIT-2021-PID-581
IACIT-2021-PID-587
IACIT-2021-PID-609
IACIT-2021-PID-647
IACIT-2021-PID-663
IACIT-2021-PID-745
IACIT-2021-PID-747
IACIT-2021-PID-775
IACIT-2021-PID-785
IACIT-2021-PID-809

Kick Sick: An Online Doctor Consultation Portal

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***Abstract*—**This paper deals with the online doctor consultation portal. The significant part of each and everyone's lifeishealth. Here in our portal, everyone will get the details about the possible diseases, allergies, sickness, etc. Even the reasons for certain diseases will be provided so that they can be cautious. Precautions to be taken will be provided. First aid details will be given so that everyone will get to know what can be done for that respective allergy or disease before consulting a doctor. Here users can consult doctors in an online portal where the doctor's details will be provided and doctors will examine the patients. Admin is the connection between the doctor and patient. Admin filters the unwanted requests by the patients and forwards the necessary requests to the doctor. Here even users have the advantage of selecting the doctors. Even doctors are filtered with respect to their specialization so that users have an advantage over this. Also, users can communicate with doctors in a chatbox, which will be provided where they can even send the medical documents, which can be examined by doctors. In case of emergency, they can take up an appointment through our portal and can consult a doctor in physical.

Online Examination Portal

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***Abstract*—**The Online Examination System is a web-based test simulator that can help you hold exams more effectively and save time. This web-based framework is used to assess students/individuals' technological abilities in the context of their respective organisations.It satisfies the need for educational institutes/universities, as well as corporations, to conduct exams without having to be physically present at a place. The system not only eliminates paperwork, but it also reduces the workload and improves the administrator's productivity.The proposed method would conduct a detailed evaluation of the individuals using a fully automated system that not only saves time but also provides quick and reliable results. Individual performance in each exam will be analysed by the method, which will provide important information to the proctor about the individual's growth.The main goal is to include all of the functionality that an Examination System should have in a user-friendly gui. Essentially, the project outlines how to manage for improved efficiency and client services.

REVA Pariksha Online Examination System

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***Abstract*—**With the current situation of the coronavirus pandemic constantly rising, Universities and schools must allow flexibility when it comes to conducting exams. This is where our online examination portal comes into picture. It is a

web-based application used for conducting exams online which replaces traditional paperwork exams. It is implemented using PHP and SQL. Online MCQs based exams can be conducted with proctoring which results in less workload for faculties and also students can give exams without the need of going to college. Teachers can add or delete questions and can also mark the correct answers for each of them. The Admin maintains the faculty and student's database and helps in allocating students and teachers of respective branches together. The teacher/students can check the student's results as soon as they complete their exam. Thus, the main purpose of this system is to save time, work of the faculty and to go environmentally friendly without using paper.

REVA Meet

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***Abstract*—** Almost every college now hosts technical / non-technical events in which we can gain knowledge by participating. This project could serve as an organizer for the various events offered by the college. This allows college administration to schedule events online and assign student volunteers to events. Event Managers can upload event-related information in the form of text and video files. Students and participants can view and download these files online.With the increase in the number of educational and recreational events and activities being conducted online and on campus, it is paramount to have a common platform for the efficient allocation of organizational resources to facilitate a systematic and dexterous methodology that avoids overlapping of schedules.

Via our Smartphone Application – REVA Meet, we intend to develop a common agenda for organizers and participants to coordinate and register for activities. Our software will use an intelligent algorithm to suggest happenings to students depending on their preferred interests and based on trending events. Push notifications and emails will be sent out in iterations as reminders before the commencement of registered happenings. Additionally, this application will use a real-time database for storage purposes, making it faster to update and add events.

REVA Meets will include both large-scale and small-scale events, updating all agendas to a common calendar. Subsequently, this application will serve as a seamless platform for ease of organization and collaboration of activities within REVA University.

Credit Card Fraud Detection

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[IACIT-2020-PID-663]

***Abstract*-** In the current economic scenario, credit card use has become extremely important. They enable the user to perform transactions of large sums of money without the requirement to carry cash for payments. They have revolutionized the path of making cashless transactions and have made it easy in making payments convenient for the buyer. This digitized form of payment is extremely beneficial but comes with its own set of shortcomings. With constant increase in number of users, credit card frauds are also increasing at a commensurate pace. Billions of dollars of loss have resulted every year by illegitimate credit card payments. The development of effective and efficient fraud detection models is key to reducing these losses, and more algorithms depend on advanced machine learning methods to help fraud investigators. As the obtainable credit card fraud data is highly imbalanced. In this paper we are overcoming this deficiency by balancing out the data and bringing out the best algorithm that segregates the transaction efficiently.

Internet Chat Application

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[IACIT-2020-PID-745]

Abstract—With the quick advancement of the Internet, an ever increasing number of individuals pick network talking instruments for correspondence. Customary constant talking programming is generally work area application programs

dependent on C/S mode, and explicit customer programs are required during application. The program based constant talking instrument needn't bother with any extra customer program, and the visual correspondence could be helpfully acknowledged through the program. The content correspondence is acknowledged through worker sending information, and the information transmission of voice and video talk is acknowledged through highlight point association between browsers. It is very simple and not only used by common people but also used widely by the corporate world. Sockets are the basic components used in java network programming. We want our application to support various clients at the same time therefore we are going to use the concept of Threads from Multithreading, a thread can be assigned for each individual request.

Passive Aggressive Classifier for Fake News Identification using web scrapped data

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***Abstract*—**Majority get affected with misleading stories spread through different posts on social media and forward them assuming it is a fact. Social media is devastatingly used to create havoc in the society by spreading fake news. Such an havoc can be controlled by using machine learning algorithms. Various methods of machine learning and deep learning techniques are used to identify false stories. There is an important need for identification and controlling of such fake news as such news posts have increased in alarming rate. Here, we used Passive-Aggressive Classifier for invalid news identification. Two datasets, Kaggle fake news dataset and a dynamically incrementing dataset is created by web scrapping of data from politifact.com website are used for training the model. After conducting the test, Passive-Aggressive Classifier ended up providing around 81.96% accuracy.

Machine Learning-based Eternity Learning Platform

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[IACIT-2021-PID-775]

Abstract— When individuals select to follow a study program infrequent cases they have to travel to another city, away from their hometown, friends, and family. Meanwhile, there are countries where gender subjects prevent young women from getting an education. In suchhardships, online education supports removing limits and barriers, both socially and physically. Online courses are the best answer to the challenges that these students face as they are provided with first-class education and in their place and time. online courses permit students to study whatever they want or anything that triggers their interest. A learning portal is a doorway to all the courses, resourcesand tools that allow teaching and learning. Learning portals as well include applications that simplify communication: Discussion forums, messaging services, emails, calendars, and so on. In its modest form, aeternity learning portal can be a storefront where learners can determine or be allotted content. In its complex form, this portal could be an ecosystem for managing all training and learning process. The presentation offers a compatible online portal for the students to study online by providing an online syllabus and conducting the test on the chapters of the specific course.This eternity learning portalwill make sure to facilitate partnership and schedule discussions among people, cultures, and subject areas. It is like a melting pot for lecturers. Young professionals who now originated into the field of online education must practice these opportunities to learn from, and build on, all the experience and disagreements that come from this melting pot. One of the mostunderstandablemisinterpretations about online courses is that they should take place in front of a PC or a Smartphone. Most students dedicate much more time studying textbooks and making assignments than surfing the Internet. Eventhough both text and video can be retrieved online, paper is often a better standard for text and television is well for offering video. Still, there is a tendency among online tutors to substitute excellent textbooks with mediocre Web material.

SHOP CHEAP- An Inexpensive and Easier Way of Shopping

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[IACIT-2021-PID-785]

***Abstract*—** Currently, the world is dealing with a cosmic scale of online shopping and mobile shopping that has provided huge opportunities for retailers and buyers to use various platforms for their trade. With the extensive availability of shopping platforms, the problem statement of browsing through several platforms, browsing for a particular product, finding the best deals, searching for coupons, etc. arises. The Model 'Shop Cheap' is an application that will reduce the efforts and time spent by a user on various platforms by providing them with the best deals, offers, coupons related to any product from all the platforms collectively. The recommendation system will have products suggested to them on accounts of their shopping habits, budget marks, and discount rates from which they regularly buy, and the users will also be suggested new deals and offer and will be notified of the latest discount rates on their favorite items based on their shopping history.

E-Commerce website for Fashion Wear

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[IACIT-2020-PID-809]

Abstract—In today's fast-changing market world, we must be more effective and quicker in responding to consumer demands in order to provide them with instant access to goods. This can be accomplished by creating an E-commerce web application for online shopping that sells a wide range of fashions and products to customers through instant payment or payment on delivery. Websites are used by many businesses to conduct commercial transactions. This would render online shopping more familiar and E-commerce a widely accepted paradigm.To introduce online shopping, consumers will need access to a virtual store on the Internet that allows them to search for items and choose from a list. To order a specific product, customers must fill out some fields. The aim of this project is to create and launch an online shopping website. Understanding server and client techniques, relational databases, and a variety of programming languages such as HTML, CSS, and REACT.JS is needed to design and build this E-commerce shopping website.

Data Mining & Artificial Intelligence-XII

IACIT-2021-PID-640
IACIT-2021-PID-651
IACIT-2021-PID-724
IACIT-2021-PID-782
IACIT-2021-PID-801
IACIT-2021-PID-811
IACIT-2021-PID-645

An Efficient techniques for enhancing security over Multitenant Cloud Environment

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Abstract— Cloud computing provides a multitenant feature that enables an IT asset to host multiple tenants, improving its utilization rate. The feature provides economic benefits to both users and service providers since it reduces the management cost and thus lowers the subscription price. Many users are, however, reluctant to subscribe to cloud computing services due to security concerns. To advance deployment of cloud computing, techniques enabling secure Multitenancy, especially resource isolation techniques, need to be advanced further. Difficulty lies in the fact that the techniques range and cross various technical domains, and it is difficult to get the big picture. To cope with that, this paper introduces different approaches for technical layers and categories, with which it identifies and structures technical issues on enabling Multitenancy by conducting a survey. Based on the survey result, this paper discusses technical maturity of multitenant cloud computing from the standpoint of security and the needs for developing both technical and operational security toward the development and wide deployment of multitenant cloud computing.

Cloud-Based Essentail Home Services Aggrregator

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***Abstract*—**Cloud-based Home services aggregator aims to provide the much needed and essential everyday services to the consumers in an easy and affordable manner. Tough times such as an epidemic call on for these services as essential and important much more than ever. Through this project we bring a common platform to those who provide the services and those who need it. The scope of the provided services ranges from basic home cleaning, car wash, laundry to much more. The project also aims to bring to platform the large - feature phone using - Indian workforce. The limited capabilities of the existing infrastructure hinder this section of workforce from connecting to better work opportunities. A potentially large number of footsteps on the side may cause it to render slowly. And so, project is built up in cloud technology.

An Intellectual Control Algorithm to Tracking the EV and HEV by using IoT Integrated HUB and Spoke Cloud Computing Technique

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Abstract: Several evolving techniques are used in modern Electrical vehicles that make them more enticing to thieves. Several anti-theft systems can protect EV and HEV from thieves. By using signal relaying, signal jamming, close-range testing, App hacking and block the signals are some of the techniques, professional and rich thieves are implementing commonly to unlock the system. In this paper A9, G GSM + GPRS + GPS module-based control algorithm is put forward to resolve the extremely constrained EV and HEV security problem involving conflicting objectives. The proposed control algorithm can be used in any device and is flexible to fit, working on convectional 3.7 V Li-ion Battery. Moreover an Arduino based vehicle tracking system can be developed by this proposed control algorithm using GPS, GSM Module. The algorithm programming on the board via Arduino IDE, the board will take some time for retrieving the location by fixing the GPS coordinates. Results also revealed that proposed data can store in the cloud by using Hub and smoke model.

Remediating Bigdata Processing Problems Using Hadoop And Spark

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[IACIT-2021-PID-782]

Abstract-Recently everyone has moved to the contactless world where all the activities are done using digital devices. Due to this 2.5 quintillion bytes of data being created every day through logs, online shopping platforms, payment portals, IOT sensor networks, etc. Storing, managing, processing of these data has become a major challenge in the field of big data. There are several methods in processing big data contents like Hadoop MapReduce, Spark etc. In this paper we will be discussing challenges in big data processing and solutions to overcome these challenges and some future predictions.

Online Bus Pass System Using Cloud Computing

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[IACIT-2021-PID-801]

Abstract- The work "Online Bus System using cloud computing" is a live work that will benefit riders who are frustrated with the existing manual bus pass system. It allows passengers to fly more easily by scanning the ticket QRCode with their mobile device. So that even though the passenger misplaces his ticket during check-in, he can still display the QRCode.TTE will review the QRcode with the admin to see whether it fits or not. The one-of-a-kind number assigned to one person cannot be assigned to other. It often extends the validity period and regularly send SMS or emails to passengers prior to the xpiration of their validity period. A credit card or debit card maybe used to pay for his/her renewal or registration. Passengers must first register with the application by uploading information such as photograph, proof of residence, and some other details online. They will check your information and if it is right, they will accept your buss pass; otherwise they will deny it. You may also renew it using a bank card or any other mode of payment.

A Novel Approach and Implementation Concept for a Nanosatellite Backup On-Board Computer

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[IACIT-2021-PID-811]

Abstract -STUDSAT-2 (STUDENT SATellite-2) is a one-of-a-kind satellite technology project undertaken by Indian undergraduate students. The aim of this project is to demonstrate the On-Board Computer's redundancy

(OBC). The OBC subsystem is one of the many subsystems that make up the STUDSAT-2 satellite system. It is critical to the satellite's operation. Even a minor malfunction in this system could lead to the mission's complete failure. As a result, OBC redundancy management is required to overcome this. As a result, the proposed model of Backup On-Board Computer for STUDSAT-2 was planned and built by incorporating redundancy in both software and hardware, thus increasing the OBC's reliability.

Detection of Pneumonia through chest x-ray images

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***Abstract*—**This project "Detection of pneumonia through chest x-ray images" is focused to ease the situation in which the need of doctor 24/7 is not required. Anyone with their chest x-ray images can run through this classifier and get to know about their lung condition. To implement this deep learning model, the dataset containing appx 5800 images is used. This data was made available openly by Daniel Kermany, Kang Zhang, Michael Goldbaum in January 2018.Our objective behind this idea is to detect whether the x-ray of the patient concludes pneumonia or not.

Machine Learning & Deep Learning

IACIT-2021-PID-673
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IACIT-2021-PID-686
IACIT-2021-PID-689
IACIT-2021-PID-693

Music Generation Using LSTM Neural Network

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Abstract- In older times music was treated as a simple sign and was produced physically. With the advancement of machine learning, Neural Networks are utilized in various fields like music, writing and pictures. Music generation is a troublesome undertaking and has been effectively investigated since decades. In this paper we are proposing a system through which we can generate music automatically using Recurrent Neural Networks. The existing system like the markov model or graph based minimization methods lack thematic structures and they are usually repetitive sequences of the same nodes. In this system we propose a bidirectional LSTM model to generate music and node sequence.

Classification of Driving Test Result Prediction Using Optimization Techniques

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Abstract- The capacity to foresee whether a person is capable of driving a vehicle in public based on the driving test he or she has taken, which is important as a safety measure. The aim of this paper is to look at how driving incidents are resolved. It goes through the tests that are used to gather, train, and test data in order to construct a model and forecast driving events. This paper allows the consumer to determine whether they will fail or pass the driving test, and the Driving License will be issued depending on their results. It depends not only on how seriously the individual took the test, as well as the user's actions. A new prediction method is introduced in this article that combines data from both the vehicle and the consumer. Logistic regression and various optimization strategies such as Gradient Descent [GD], Stochastic Gradient Descent [SGD], and Mini Batch Gradient Descent [MBGD] were used to forecast the driving activities. The results for the driving incidents collected indicate a precision of 89% for the forecast using Gradient Descent.

ANALYTICS OF PHISHING ATTACKS USING MACHINE LEARNING

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Abstract - Cyber-attacks which is known as Computer Network Attack (CNA). It is a threat created by cybercriminals by more than one computer against networks. There are various types of cyberattacks among them Phishing Attack is one of them. Phishing is a technique of gathering sensitive information of a target such as username, password, bank details etc. There are various ways to perform phishing attacks, among them URL PHISHING attack is one way to

gather user's information. Mainly hackers create a fake website regarding bank details, shopping websites, etc. using social engineering tool which looks like legitimate website. This fake URL will be sent to user via email or through some other resources. In this paper, we will be performing data analysis, data pre-processing, data exploring, training and predicting through machine learning and optimization techniques on dataset which contains two attributes (URL, Label). We will be introducing performance metrics like confusion matrix accuracy, precision, recall and F1 score to know the performance of the model. An optimization technique which is Stochastic gradient descent performed better than logistic regression.

Recognizing phishing site using Machine Learning- A Comparative Approach

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Abstract—Endeavoring to aggregate individual information through deceiving ways is ending up being more ordinary nowadays. To assist the customer with thinking about the permission to such locales, the assisted framework prompts the client through email and additionally springs up when attempting to get to a phishing site. This paper proposes a methodology of a phishing affirmation framework to perceive boycotted URLs, regardless, called phishing connections of a site, so people can be frightened while examining or getting to a particular site. Thus, it might be utilized for unmistakable proof and confirmation and become a legitimate instrument to hold an individual back from getting tricked. This examination gives an unrivaled perception of phishing locales. We used distinctive data preprocessing and text preprocessing techniques to improve precision and accuracy. An app is developed as the end product of this research work.

IoT based Water Management System with Machine Learning

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Abstract- This paper discusses a keen way to manage and distribute water from a water tank or reservoir to consumers with minimal wastage. The aim of this paper is to discuss about the implementation of an IoT (Internet of Things) based water distribution system that will diminish the water wastage by consumers. The setup can be extended from a small society to the entire urban infrastructure. The proposed system consists of a waterflow sensor, actuator, microcontroller (ESP8266), and a web- application which can remotely control, cut, monitor, and analyze the water usage. Administrators will have access to restrict the water flow and upon consumers' requests ancillary water can be supplied. Also, this system is equipped with machine learning algorithms to predict the usage and learn the flow patterns of water among different user spaces, which will be useful to estimate the water requirements. Also, classify consumers based on their usage. The application is equipped with a reward system where consumers are rewarded with ancillary water when their consumption is minimal.

Review on Gender and Age Detection using OpenCV

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Abstract- Gender and age detection is a process in which we feed the computer with data, the data might consist of images of different genders and different age groups. The computer detects various factors depending on the requirement and inputs. Age and gender detection is a very hot topic considered by researchers because of its importance in various fields like security, image processing etc. Detection helps in enhancing the computer vision to a greater extent. In this work, python language is used and OpenCV is a library which stands for Open-Source Computer Vision which boasts the analytical capabilities and processes real time images and videos. Deep learning frameworks such as PyTorch, caffe, Tensor Flow are supported by OpenCV. Convolutional Neural Network (CNN) architecture is used for image processing. CNN is basically a regularised multilayer perceptron which consists of input and output layers. The main objective of this work is to build a gender and age detector which gives approximate results of age and gender either fed manually or detected by camera using Deep learning techniques.

Plant Disease Detection Using Convolutional Neural Network

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Abstract- Gardening is a craftsmanship that studies land use, plant development and livestock. Since plant pollution is normal, and if ignored in this area, it will have a real impact on the profitability of plants and individual elements. The use of a programmed strategy is beneficial because it reduces the great efficacy of high-yielding plants and recognizes the side effects of the disease as early as possible. Corrective measures that can be used to fight disease. The information index obtained from the Internet is reasonably restricted, and certain plant species can be sensed and renamed to describe the actual information index, and then the test information index containing certain plant diseases can be obtained to test the accuracy and safety level. Hard work. At this point, we will use intermediate data to adjust the classifier and then expect performance with the desired accuracy. The Convolutional Neural Network (CNN) we are using contains different layers for guessing. We received photos of the plants, which is the promise of the project. On this basis, the project shows us whether the plants are in good condition. Through our code and model preparation, we achieved 98% accuracy. Our terms provide us with the name of the plant species and its safety level and corrections that can be accepted as corrections.

HUMAN ACTIVITY RECOGNITION USING CNN AND LSTM DEEP LEARNING ALGORITHMS

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Abstract- Human Activity Recognition [HAR] recognizes and classifies the activities performed by the users or people based on the data collected from the sensors of special devices such as smart-watches, smartphones etc. It has become easy to collect a huge amount of data from inertial sensors that are embedded in wearable devices. An accelerometer and gyroscope sensors are most commonly used inertial sensors. There are various already available datasets, in our paper, we are using the WISDM dataset which contains 1,098,207 data of 6 physical activities performed. In this paper, the activities we aim to classify are walking, jogging, going up and down, sitting, and standing. There are various machine learning [ML] and deep learning [DL] algorithms applied on the various datasets. In our paper, we use Convolutional Neural Network [CNN] and Long Short Term Memory [LSTM] deep learning algorithm on the data set, we split the data into training data [80%] and testing data [20%]. By using a confusion matrix we recognize and classify the activities performed using maximum accuracy.

Data Mining & Artificial Intelligence-XIII

IACIT-2021-PID-509
IACIT-2021-PID-639
IACIT-2021-PID-641
IACIT-2021-PID-737
IACIT-2021-PID-753
IACIT-2021-PID-783
IACIT-2021-PID-799

Monitoring Social Distancing Using Opencv

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***Abstract*—**The paper presents a procedure for social separating recognition utilizing profound figuring out how to assess the distance between individuals to relieve the effect of this COVID-19 pandemic. The location instrument was created to make individuals aware of keep a protected distance with one another by assessing with the help of videos as input. Input video outline out of camera is been utilized as information, together with free and open source object location before been prepared framework dependent on YOLOv3. Calculation that's been utilized in order to obtain walker identification. Afterward, the input frame outline be exchanged into elevated perspective for estimating distance with respect to 2-Dimensional plane. Range between individuals been assessed and apart of rebel liou spairing between individuals during showcase is shown by RED edge and line. The presented strategy is approved over a pre-recorded input frame of people on foots trolling in city. This outcome displays the presented technique such that it can decide about social removing calculations with respect to numerous individual sin input frame. This created procedure additionally evolved as discovery apparatus progressively implemented.

Fake News Detection And Correction Using Novel Stance Detection Model

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***Abstract*—**The presence of misleading information in everyday access media outlets like social media feeds, blogs, etc have made it a challenging issue with respect to identifying trustworthy sources thus resulting in the increase in the need of the computational tools which are able to provide insights into the reliability of the online content available at the snap of our fingers. In the present scenario, the increase in usage of social media is resulting in more information being created or shared some of which is misleading with having little to no relevance to reality. Automating the detection of fake news is quite a challenging task as we need to explore various aspects before giving a verdict on the truthfulness of a news article. In this work, we propose a model which uses Web Scraping and Crawling, Machine learning and deep learning techniques to help identify the truthfulness of an article. This yields a comprehensive audit of detecting fake news by including fake news categorization and a few existing algorithms in machine learning.

Using Neural Network To Recognize Handwriting Characters

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[IACIT-2020-PID-641]

Abstract--The aim of the project is "To make Neural Networks aware of handwritten characters", that is, to create a platform that converts handwriting into digital text using Neural Network & Optical Character Recognition. This paper provides an in-depth study of text acquisition, tracking and image recognition with three major contributions. First, it is proposed that a standard framework for the release of image text that equally describes the discovery, tracking, recognition and their relationships and interactions. Second, within this framework, the various methods, systems, and procedures for visualizing the text of an image are summarized, compared, analyzed and the extracted text is converted and extracted by voice. Thirdly, related applications, outstanding challenges, and future directions for image editing are also well discussed.

Face Mask Detection Using Tensorflow and CNN

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Abstract—The COVID-19 pandemic has led to many organizations around the world enforcing face masks rules for personal protection. Manual checking whether individuals entering an organization's premises are wearing mask is complex and possibly conflict. There has been relatively little work on automatic face mask rule violations thus far. I propose a system for automatic monitoring for face mask rule violations for enterprises. So I decided to build a very simple and basic Convolutional Neural Network (CNN) model using Tensor flow with Keras library and OpenCV to detect if you are wearing a face mask to protect yourself.

Automatic Speech Emotion Recognition Using Machine Learning

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[IACIT-2020-PID-753]

Abstract- For several years, emotion detection from speech signals has been a research topic in human-machine interface applications. To discern emotions from speech signals, a variety of devices have been developed. Theoretical definitions, categorizations, and modalities of emotion expression are all discussed. To conduct this research, a SER framework based on various classifiers and feature extraction methods was developed. The mel-frequency cepstrum coefficients (MFCC) and modulation spectral (MS) characteristics of speech signals are analysed and fed into various classifiers for training. Using feature selection, this method is used to find the most important function subset (FS). The features extracted from emotional speech samples that make up the database for the speech emotion recognition system include power, pitch, linear prediction cepstrum coefficient (LPCC), and Mel frequency cepstrum coefficient (MFCC). The effectiveness of classification is determined by the extracted features.

TABFYE - Take-A-Break-For-Yourself

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[IACIT-2021-PID-783]

Abstract—TABFY (Take-A-Break-For-Yourself) is a software for Windows/Linux/macOS which aims to tackle Computer Vision Syndrome (CVS) and Repetitive Strain Injury (RSI). Sitting in front of computer for a long period of time can harm eyes, neck, and hands. The software helps the user to take regular breaks and suggests some exercises which can help the user maintain a healthier life. The software can be customized to give reminders in various levels of strictness. It keeps track of the amount of blinking done by the user and also the amount of time the user is using the

computer without a break. It proactively gives a notification that the user hasn't blinked or taken a break for too long. The time, day and frequency of reminders can also be customized. TABFY aims to be the one single app to manage all of computer-related problems.

BEHAVIOUR PREDICTION USING MACHINE LEARNING AND DJANGO

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[IACIT-2020-PID-799]

Abstract- Behavior can be defined as a set of features which makes a person unique. The education of behavior is of central importance in consciousness. There are various conventional ways of assessing one's behaviour which either costs too much of manual struggles or cannot be done in real time. To resolve these problems, this research aims to measure the Big-Five from a set of questions. The user is asked to answer a set of few queries and according to the questions answered by the user the behaviour of the user is predicted using logistic regression model.

Emerging Trends

IACIT-2021-PID-564
IACIT-2021-PID-735
IACIT-2021-PID-791
IACIT-2021-PID-803
IACIT-2021-PID-820
IACIT-2021-PID-821
IACIT-2021-PID-614

COVID-19 Face Mask Detector Using OpenCV

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[IACIT-2020-PID-564]

Abstract: Coronavirus pandemic delivered about by way of novel Covid is regularly spreading up to this factor anyplace the world. The impact of COVID-19 has been fallen on most areas of advancement. The consideration framework goes thru an emergency. a few prudent steps are taken to scale lower back the unfurl of this sickness the place conveying a cowl is one amongst them. throughout this venture, we have a tendency to endorse a framework that restrict the improvement of COVID-19 by means of looking out for folks that do not show up to deliver any facial cowl in an extremely good city community any vicinity each one of the usual populace locations are checked with cameras. although an character whilst now not a cowl is identified, the pertaining to authority is hip to thru the city organization. A profound studying configuration is organized on a dataset that contains of photographs of human beings with and preserving in thought that now not covers gathered from fluctuated sources. The organized diagram executed 98.7 accuracy on trademark human beings with and maintaining in thought that no longer a facial cowl for previouslyconcealed test information. it is depended on that our examination would be a useful thingamajig to scale back.

Review on Algorithms, Theory of Generative Adversarial Networks applied to Constrained Image synthesis

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Abstract—In recent years, Image based (data driven) methodologies like Deep Learning and Computer Vision are more popular and precise in finding the features inside the image and generate realistic images. These give rise to Generative models like Variational Autoencoder and Generative Adversarial Networks (GAN). GANs play a major role in research as they translate images from one domain to another keeping structure aligned with input and generates realistic images as output. They are comprised of generator and discriminator networks trained in competition with each other to learn and generate distributions. There are many GAN algorithms proposed since 2014. GANs with different machine learning algorithms are used in many real-world applications. Very few comprehensive studies on GANs are available on different applications in literature. In this paper we try to give an insight on GANs in terms of theory and algorithms and also emphasize on review of applications of GAN in constrained image synthesis majorly image-to-image, text-to-image and sketch-to-image translation.

Detection of Tumours From MRI Scans Using Segmentation Techniques

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[IACIT-2021-PID-791]

***Abstract*—**MRI scan is commonly used in treating brain, prostate, uterus cancer, ankle and foot cancers. In our work we are using real medical images of uterus cancer, brain tumour and throat cancer images from Sagar hospital. Image processing is a technique used to derive information from the images. MRI images are usually likely to suffer from noises such as Gaussian noise, salt pepper noise and speckle noise. Noise removal is very important task to make the image clearer with high accuracy and for further diagnosis process. In our paper tumour image processing involves three stages 1) converting RGB images to grayscale, 2) pre-processing the images using Gaussian, median and anisotropic filters for noise removal and image enhancement 3) Segmentation of the tumour using watershed and Active contour method. We compare the results of watershed and active contour method. Water shed algorithm gives better results compared to active contour background subtraction method. This method is useful in analyzing the tumour region accurately in less span of time and extracting inferior parameter of the tumour.

DIAGNOSIS OF ANXIETY & DEPRESSION IN KIDS USING MACHINE LEARNING

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[IACIT-2020-PID-803]

Abstract — Childhood perturbation and dejection repeatedly go unexplored, if these conditions are not handled in a timely manner by doctors, then these conditions, might lead to in conjunction known as behavioral disorders, leading to enduring pessimistic outcomes including narcotic misuse and high likelihood for suicidal tendencies. This work provides a latest method for identifying young children with behavioral disorders using a articulated data. This paper is aimed at presenting an approach for recognizing the behavioral disorders using self-learning techniques. The audio attributes of differential of behavioral disorders are examined in detail, presenting that affected kids unveil mostly shallow tones, with replicating utterance modulations and subject, and high-pitched reaction to surprising stimuli relative to controls.

SKIN DISEASE ANALYZER

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Abstract-Skin types of diseases are one of the most common and widespread diseases in the world, as people get skin disease due to inheritance, ageing, hormones, allergic reaction, exposure to sun or toxic chemicals and also environmental factors. Despite its prevalence, diagnosis is exceedingly difficult due to the nuances of skin tone, hue, and hair presence. Many people overlook the effects of skin disease as it is still in its early stages. In the current method, skin diseases are diagnosed by a biopsy procedure, which is then examined and medications administered manually by physicians. To overcome this manual inspection and to provide the proper results in a short time, this paper proposes a skin disease detection method using image processing, python and yolov3 tool. As an input to the system, the patient can provide an image of the infected skin area. Image processing techniques are performed on this image and feature values are extracted and detected and the disease is analyzed. The proposed system is highly beneficial in areas where there is limited access to dermatologists. Paper provides an approach for the identification of four types of skin disease like acne, melanoma, blisters and cold sore. The main goal of this method is to achieve the highest level of skin disease prediction accuracy possible.

Plant Disease Identification Using Machine Learning Techniques

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Abstract—Plants have become a principle wellspring of energy and are a basic piece in the riddle to work out the issue of a worldwide temperature alteration. There are various kinds of infections which are available in plants. To identify these sicknesses design are needed to remember them. A typical methodology for this situation is the utilization of distant detecting strategies that investigate multi and hyper unearthly picture catches. The strategies that receive this

methodology frequently utilize advanced picture preparing devices to accomplish their objective. In this paper, various machine learning techniques are used for automatic detection and classification of plant leaf diseases. It also covers survey on various diseases classification techniques that can be used for plant leaf disease detection. In the remain work back proliferation and head segment investigation are utilized to distinguish plant sicknesses. These calculations are gained from preparing management in neural organization. There is an issue of exactness in these calculations.

PC VISION BASED UNPRETENTIOUS CLASSROOM ATTENDANCE TRACING FRAMEWORK/TECHNIQUE

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Abstract— Fossil classroom environment follows a manual attendance marking system either by calling the student's names it interrupts the teaching procedure and also takes a lot of time. It can also lead to factors like a proxy. To overcome this issue, we have introduced a high-definition camera that will be installed in every classroom which captures the student images from all angles.

Advanced and Emerging Applications

IACIT-2021-PID-569
IACIT-2021-PID-590
IACIT-2021-PID-601
IACIT-2021-PID-720
IACIT-2021-PID-722
IACIT-2021-PID-750
IACIT-2021-PID-759
IACIT-2021-PID-780

Smart Calculation Using Edge Computing

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Abstract—Number of things are getting connected to Internet so Necessity of data on Edge in Real-time and without latency, With Edge computing system we can perform Efficient Data processing has large amount of data and it reduces internet bandwidth. Edge computing is a new computing pattern in which fundamental compute and storage Resources are placed at Internet, Nearer to Mobile devices, Sensors and Internet of things (IOT) this will increase Latency.

People Counting System For Retail Analytics Using EDGE AI

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***Abstract*—**Developments in IoT applications are playing an important role in our day-to-day life, starting from business predictions to self-driving cars. One of the areas most influenced by the field of AI and IoT is retail analytics. In Retail Analytics, Conversion Rates - a metric which is most often used by retail stores to measure how many people have visited the store and how many purchases have happened. This retail conversion rate can be put to use by making smart decisions on marketing operations, increasing stock, store outlets and running promotions etc. Our project aims to build a cost-effective people counting system with AI at Edge, where it calculates Conversion rates based on the total number of people counted by the system and number of transactions for the day, which aids in providing analytical insights for fashion store optimization while requiring very minimum hardware.

Crowd Monitoring System

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***Abstract*—** In this time when COVID-19 is increasing hastily, it is important to maintain a distance from each other and stay away from the crowd in this way we can decrease the virus spread. Many people, intentionally or unintentionally, assemble and wander on the streets. Monitor all these activities is tough. Our Smart COVID-19 Crowd Detection Camera will keep an eye on all activities and detect any crowd on the place. The device also can alert the concerned authority about unneeded gatherings. An active surveillance system can detect the distance between individuals and warn them in this way we can decrease the spread of deadly diseases.

DONOR DRIVE

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Abstract **—**Our project deals with the online Donor-Drive portal. The significant part of each and everyone's life is health here in our portal, everyone will get the details about the Latest Donor-Drives details, Donor/Receiver and hospitals/Organ-Bank and NGO Interaction Details also available in this application. Here users can direct interact with the Organ-Bank in an online portal where the Donor-Drive details will be provided and Donor will check all the details and based on the interest they can apply for it to participate in the Donor-Drives after applying the user can verify the request status based on the acceptance the Donor (user) can participate in it. Here even users have the advantage of selecting the Organ-Banks for requesting the organ. Even Organ-Banks and Hospitals Details are filtered with respect to their location so that users have an advantage over this. Also, users can communicate with Hospital User and Organ-Bank user directly after accepting the request, which will be provided where they can even send the medical documents to the NGO (Trust) through their email which can be examined by NGO(Trust). In case of emergency, they can directly interact with NGO or Organ-Bank or Hospital users through our portal phone numbers of respective user will also be provided given emergency.

HaemoEdge – Saving Lives

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Abstract**—** This paper centers around the Blood Donation System, an Android application intended to go about as a contact medium between blood contributors and beneficiaries. Contributors should fabricate profiles in the framework by giving essential subtleties like their name, blood classification, email address, secret key, and definite area. The Google API has been fused with this program to decide the specific situation of a giver. The area of a benefactor is constantly refreshed in the portable application. Thus, the machine will find an enrolled giver regardless of where the individual in question goes. Guests can look through blood givers from the landing page by blood bunch and where blood is required. The framework will show the accessible givers alongside their telephone number, email address and postage information through orchestrating them by closest spot and blood gift lapse date. Guests can send message to all givers through email however a part can send message utilizing email and cell phone. An arrangement will be made just at whatever point a benefactor affirms that he/she will give blood. The objective of this paper is to lessen the intricacy of the framework to discover blood givers in a crisis circumstance.

Review Paper on Design and Development of DMFC using PVA-PANI Composite on Nafion Membrane

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[IACIT-2021-PID-750]

Abstract**—**The immediate methanol energy unit (DMFC) is the substitution of lithium-particle batteries in practically every one of the convenient electronic devices, in which current DMFCs work at double the force thickness of current lithium-particle batteries with moment refuel capability. It's realized that, the DMFC will give higher force densities, just if the center of this power module – the polymer electrolyte layer (PEM) – were more impervious to the fuel (methanol). In this way, the plan and improvement of Nafion® (the most ordinarily utilized PEM in energy components) substitutesthat show high proton conductivity and low methanol porousness (high selectivity) is a functioning space of examination. Polymer mixes are a humble and worthwhile strategy to advance layers that conjoin the ideal vehicle properties. Until now, there is fractional exploration in the space of PEM mixes, and besides, various uncertain inquiries. In this investigation, the properties of mix organization, science, and handling on polymer morphology and thereafter

the vehicle properties and selectivity were analyzed. A significant impact in this investigation is correlation arrangement of cast films to warm squeezed layers. The last target is to coordinate with both the layers to furnish immiscible mixes with low selectivity, while likewise with the writingreview tempered arrangement cast layers improved miscibility and thusly selectivity. The result with this examination is to discover the DMFC execution of a strengthened arrangement cast mix layer of Nafion®/poly (vinyl liquor) (PVA) (with just 5 wt% PVA) was 33% higher than Nafion® (the business standard) at a high methanol fuel fixation.

Condition Monitoring of Power Transformer: A Practical Approach

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[IACIT-2021-PID-759]

Abstract- Power transformer is important and expensive component in the electric power system. At electricity utilities still maintenance approach is time and age based only. This paper describes how various observed, measured, testing conditions used for calculation of 'health indices' to support reference for asset management programmes to management and asset cares. Power transformers are important assets in electrical network, considering cost and reliability. The conditions of these assets have to be known, in order to avoid any possible outages and to choose the appropriate maintenance operation that could be done. The health index of a power transformer is one single overall indicator that represents its condition and is derived by a weighting process of all available indicators.
This paper presents a case study on several power transformers having different capacity and discussing the benefits of using health index and failure probability as overall diagnostic tools. Moreover, a remaining lifetime calculation based on the transformer failure probability is defined.

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[IACIT-2021-PID-780]

Abstract-In this World of internet, e-commerce is developing by a really fast phase and limits with hold on the development of brick-and-mortar method of businesses in the residue. Much of the time, brick-and-mortar businesses are resorting in having a partnerthat is online shopping. People in the developedand in developing nations presently use e-commerce websites consistently to Shop their daily needed through online shopping. But this e-commerce Websites still need a lot of care in under-developed nations, as it isn't unreasonably great and there is a ton to desire for updating this websites.

Data Mining & Artificial Intelligence-XIV

IACIT-2021-PID-595
IACIT-2021-PID-704
IACIT-2021-PID-732
IACIT-2021-PID-749
IACIT-2021-PID-764

An Intellectual Control Algorithm to Tracking the EV and HEV by using IoT Integrated HUB and Spoke Cloud Computing Technique

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[IACIT-2020-PID-595]

***Abstract*—**Several evolving techniques are used in modern Electrical vehicles that make them more enticing to thieves. Several anti-theft systems can protect EV and HEV from thieves. By using signal relaying, signal jamming, close-range testing, App hacking and block the signals are some of the techniques, professional and rich thieves are implementing commonly to unlock the system. In this paper A9, G GSM + GPRS + GPS module-based control algorithm is put forward to resolve the extremely constrained EV and HEV security problem involving conflicting objectives. The proposed control algorithm can be used in any device and is flexible to fit, working on convectional 3.7 V Li-ion Battery. Moreover an Arduino based vehicle tracking system can be developed by this proposed control algorithm using GPS, GSM Module. The algorithm programming on the board via Arduino IDE, the board will take some time for retrieving the location by fixing the GPS coordinates. Results also revealed that proposed data can store in the cloud by using Hub and smoke model.

House price prediction using Voting Ensemble and Microsoft Azure

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***Abstract*—**Therelationshipbetweenhousecostsandalsotheeconomy may be a major inducement for prognostication house costs. A property's worth is significant in land transactions. Housing value trends don't seem to be solely a supply of concernfor consumers and sellers; however, they conjointly give insightinto this economic state of affairs. As a result, it's essential topredict housing costs disinterestedly so as to help each consumersand sellers in creating selections. we have a tendency to square measure developing a housing value prediction model victimization ballo tensemble,a machine learning model that trains on associate ensemble of assorted models associated predictsan output (class) supported the very best chance of the chosen category because the output.

Nature-Inspired Metaheuristic Scheduling Algorithms in Cloud: A Systematic Review

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Abstract—Complex huge scale scientific applications are simplified by workflow to execute in the cloud environment. The cloud is an emerging concept that effectively executes workflows, but it has a range of issues that must be addressed in order for it to progress. Workflow scheduling using a nature-inspired metaheuristic algorithm is a recent central theme in the cloud computing paradigm. It is an NP-Complete problem that fascinates researchers to explore the optimum solution using swarm intelligence. This is wide area where researchers are working from long time to find optimum solution but due to lack of actual research direction, aim of young researcher becomes faint. To provide the exact requirement of current era is the main objective of literature review which provides the concrete path to the researcher. Our systematic and extensive analysis of scheduling approaches involves recently high-cited metaheuristic algorithms like Genetic Algorithms (GA), Whale Search Algorithm (WSA), Ant Colony Optimization (ACO), Bat Algorithm, Artificial Bee Colony (ABC), Cuckoo Algorithm, Firefly Algorithm and Particle Swarm Optimization (PSO). Based on various parameters, not only we classify them but also furnish comprehensive striking comparison among them with the hope that our efforts will assist recent researchers to select the appropriate technique for further undiscovered issues. We also draw the attention of recent researchers towards some open issues to dig out unexplored areas like energy consumption, reliability and security for considering as future research work.

A Study on various categories of Load Balancing Technique in Cloud Infrastructure

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Abstract— In this pandemic situation the physical world is adapted the virtual world. Cloud computing plays a major role for storing and computing the data using remote computing infrastructure for solving the day to day activities. One of the most important challenges of cloud computing is load balancing. Load balancing mechanism distributing the system's load among its various nodes in order to maximise resource efficiency and job response time. The major issues in load balancing are Geographical Distributed Nodes, Single point of failure, Virtual Machine Migration, Heterogeneous Nodes, Storage Management, Load Balancer Scalability and Algorithm Complexity. Load balancing ensures that each node in the network enhance response time, reduce cost, and provide improved performance. This paper address the various cloud computing balancing algorithm survey.

Privacy preserving Biometric System Based Secure Data Access and Public auditing method in Cloud Computing

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[IACIT-2021-PID-764]

Abstract: - Biometric structure had getting dynamically eminent recently. With making in the disseminated registering, storing owners of data base are pulled into the outsourcing the size of biometric data and getting to tasks to the expensive accumulating, computation charges, However bringing perils to cloud customers security. In this paper, we propose a got and security by biometric accessing plan. Decides, that biometric data's mixed also, transport off the cloud specialist. In which a biometric getting to, the data base providers encodes request data by then submits to cloud. Cloud plays out a couple strategy on the scrambles data base boat off it and returns the respect the owner of the informational index. A security assessment tells that arrangement is gotten in fact, even at the time aggressors needs to attack on the informational index and need to get to the customers data present in the cloud. Differentiated and various shows that the results uncovers to us the arrangement improved execution bring about preparation technique just as in the affirmation frameworks too.

Reading maketh a full man; conference a ready man; and writing an exact man.
~ Francis Bacon
AZ QUOTES

Best Wishes

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