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108
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Department of *Information Technology* Presents
International conference on

**"Recent Innovations in Computer Engineering
and Information Technology"** on 24th & 25th February 2023

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Dr.P.Santosh Kumar Patra

(ICRICEIT-23)

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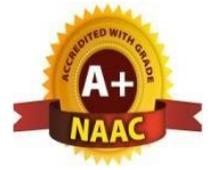
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Department of Information Technology

2nd International Conference
on

*“Recent Innovations in Computer Engineering
and Information Technology (ICRICEIT-2023)”*

Patron, Program Chair
&
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Dr. P. SANTOSH KUMAR PATRA,
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Sri. M. LAXMAN REDDY
CHAIRMAN



MESSAGE

I am extremely pleased to know that the Department of Information Technology of SMEC is organizing 2nd International Conference on “**Recent Innovations in Computer Engineering and Information Technology–2023 (ICRICEIT–2023)**” on 24th and 25th of February 2023. I understand that the large number of researchers has submitted their research papers for presentation in the conference and for publication. The response to this conference from all over India and Foreign countries is most encouraging. I am sure all the participants will be benefitted by their interaction with their fellow researchers and engineers which will help for their research work and subsequently to the society at large.

I wish the conference meets its objective and confident that it will be a grand success.

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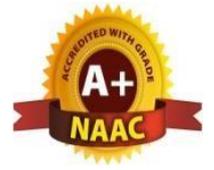
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Sri. G. CHANDRA SEKHAR YADAV
EXECUTIVE DIRECTOR



MESSAGE

I am pleased to state that the Department of Information Technology of SMEC is organizing 2nd International Conference on “Recent Innovations in Computer Engineering and Information Technology -2023 (ICRICEIT–2023)” on 24th and 25th of February 2023. For strengthening the “MAKE IN INDIA” concept many innovations need to be translated into workable product. Concept to commissioning is a long route. The academicians can play a major role in bringing out new products through innovations.

I am delighted to know that there are large number of researchers have submitted the papers on Interdisciplinary streams. I wish all the best to the participants of the conference additional insight to their subjects of interest.

I wish the organizers of the conference to have great success.

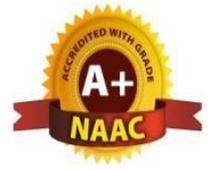
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**Dr. P. SANTOSH KUMAR
PATRA PRINCIPAL**



I am delighted to be the Patron & Program Chair for the 2nd **International Conference on “Recent Innovations in Computer Engineering and Information Technology -2023 (ICRICEIT–2023)”** on 24th and 25th of February 2023. I have strong desire that the conference to unfold new domains of research among the Information Technology fraternity and will boost the knowledge level of many participating budding scholars throughout the world by opening a plethora of future developments in the field of Information Technology.

The Conference aims to bring different ideologies under one roof and provide opportunities to exchange ideas, to establish research relations and to find many more global partners for future collaboration. About 75 research papers have been submitted to this conference, this itself is a great achievement and I wish the conference a grand success.

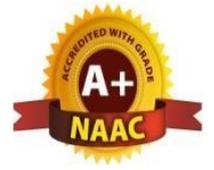
I appreciate the faculties, coordinators and Department Head of Information Technology for their continuous untiring contribution in making the conference a reality.

**(Dr.P. Santosh Kumar Patra)
Principal**



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Dr. Sanjay Kumar Suman

Dean R&D



MESSAGE

Research, curiosity and discovery has been in existence ever since man's presence on this planet millions of years ago, civilization has been characterized by curiosity and discovery. Therefore, the curiosity to explore what will happen, how it happens, is there a better way to do it, has been the driving force behind all research efforts. During the past few decades, the engineering faculties have taken a number of initiatives to reorient the engineering machinery to play leading roles in the industrial development process.

I am delighted to acknowledge the international conference on 2nd International Conference on “Recent Innovations in Computer Engineering and Information Technology -2023 (ICRICEIT–2023)” on 24th and 25th of February 2023 organized by the department of Information Technology. I appreciate organizing team for showing their keen interest in organizing a successful conference to provide a platform for contributors to explore new ideas and exchange research findings among researchers.

I thank the support of all students, authors, reviewers, conference team, faculty members, and conference Convenor for making the conference a grand success.

Best Wishes

Dr. Sanjay Kumar Suman

Dean R&D



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Dr. R. Nagaraju,
CONVENER

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MESSAGE

The world is always poised to move towards new and progressive engineering solutions that results in cleaner, safer and sustainable products for the use of mankind. India too is emerging as a big production center for world class quality. Computer Science, Electronics, Information Technology and Electrical Engineering play a vital role in this endeavor.

The aim of the 2nd International Conference on “**Recent Innovations in Computer Engineering and Information Technology -2023 (ICRICIT-2023)**” being conducted by the Departments of Information Technology of SMEC, is to create a platform for academicians and researchers to exchange their innovative ideas and interact with researchers of the same field of interest. This will enable to accelerate the work to progress faster to achieve the individuals end goals, which will ultimately benefit the larger society of India.

We, the organizers of the conference are glad to note that more than 75 papers have been received for presentation during the online conference. After scrutiny by specialist 53 papers have been selected, and the authors have been informed to be there at the online platform for presentations. Steps have been to publish these papers with ISBN number in the Conference Proceedings and all the selected papers will be published in Scopus / UGC recognized reputed journals.

The editorial Committee and the organizers express their sincere to all authors who have shown interest and contributed their knowledge in the form of technical papers. We are delighted and happy to state that the conference is moving towards a grand success with the untiring effort of the faculties of Information Technology of SMEC and with the blessing of the Principal and Management of SMEC.

Dr. R. Nagaraju
HOD-IT



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Human Action Recognition using Surveillance Camera

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ABSTRACT

The aim of this project is to develop a model for human actions such as running, jogging, walking, clapping, handwaving and boxing. A series of videos is given for the layout, where an individual executes an event in each video. The action performed on that particular video will be the label of a video. This relationship must be learned by the model, and the label of an input (video) which he never saw can then be predicted. Technically, despite descriptions of these acts, the model would need to learn to distinguish between various human behaviors. There may be many content identification programs which can work on following jobs like Active object tracking for identifying an item such as a vehicle or a human from a CCTV picture and learning the patterns in the movement of humans when we are able to create a pattern that will guide us (humans) to perform a variety of activities.

Keywords: Surveillance Camera, CCTV, Object tracking.

System for Paying at Restaurant: Rest API

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ABSTRACT

Culinary business is a business opportunity that is most in-demand, E Bill Resto is a restaurant billing system that was developed by involving several selling places/restaurants with the name of a brand that is connected to the parent company by a database server. With an integrated system, all revenue from restaurant sales can be monitored in real time. The system design is made by implementing the RESTful API architecture with security access tokens. The Master Application as a provider of Embedded Data Service Web resources on 3 Restaurant Information Systems, It does the synchronization of 3 Web Service Clients, Data From the Master-Slave Side was obtained by testing 3 data sampling, where both applications are tested QoS (Quality of Service) with 3 new data samples, from the INDOSAT Internet Provider which showed an average test result of Throughput of 170.3 bps, Packet Loss of 18.851% and Delay (latency) of 78.4 Ms. Whereas using the TELKOM Internet Provider with an average throughput of 259.5 bps, Packet Loss of 14.28% and delay (latency) of 83.8 Ms. Then it can be concluded that testing based on TIPHON Throughput and Delay (latency) from INDOSAT 4G and TELKOM signal Internet Providers showed the category of "Very Good" while the Packet Loss test obtained the "Bad" category.

Keywords: Quality of Service, API, Packet Loss.

Detecting Email Spam or Ham using machine Learning

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ABSTRACT

In addition to the undeniable benefits, the development of the Internet has led to many undesirable security effects. Spam emails are one of the most challenging issues faced by the Internet users. Spam refers to all emails of unsolicited content that arrive in a user's email box. Spam can often lead to network congestion and blocking or even damage to the system for receiving and sending electronic messages. Thus, appropriate classification of spam email from legitimate email has become quite important. This paper presents a new approach for feature selection and Iterative Dichotomiser 3 (ID3) algorithm designed to generate the decision tree for email classification. The experimental results indicate that the proposed model achieves very high accuracy.

Keywords: ID3, classification, cluster.

UGC AUTONOMOUS

Classification of Dental Alignment in X-Ray Images using Machine Learning

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ABSTRACT

Dental diseases like dental anomalies, periapical abscess, and dental caries are increasing day by day in children and adults. Artificial intelligence and neural networks, with their application in medical imaging, are influencing the health-care industry. X-ray imaging is the most commonly employed technique to diagnose diseases of the teeth. Segmentation and classification of differing dental anomalies using neural networks is proving to be a boon to the dental field. Application of neural algorithms aids in obtaining images with better detection accuracy. Automated detection reduces the workload of a dentist with classification being accurate. A better penetration of machine learning into these processes highlights its advantages to classify dental X-ray images. Powerful machine learning techniques are deployed to detect dental caries from X-ray images. Computer Vision is used to perform Jaw separation from the X-rays

Keywords: Surveillance Camera, CCTV, Object tracking.

Movie Recommender System using Sentimental Analysis

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ABSTRACT

In Today's era, Recommendation systems are the most important intelligent systems that play an important role in giving personalized information to the users. Personalization of services helps enhance the business reach, increases viewership and in turn increases sales. It is used across many renowned platforms like Amazon, Netflix, Prime Video, Hotstar, Aha, Instagram etc. The working of this system in recommending movies is explained furthermore.. Personalization of services helps enhance the business reach, increases viewership and in turn increases sales. With availability of online data movie recommendation systems makes the best of this information to suggest user accurately. Movie recommender systems helps in increasing the sales of company and in promotion of movies and television shows that users may actually like. Movie recommender systems uses efficient algorithms to suggest movies and shows to users.

Keywords: Surveillance Camera, CCTV, Object tracking.

UGC AUTONOMOUS

Cross- Site Request Forgery Detection

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ABSTRACT

In this paper, we propose methodology to leverage Machine Learning (ML) for the detection of Web application vulnerabilities. Web applications are particularly challenging to analyses, due to their diversity and the widespread adoption of custom programming practices. ML is thus very helpful for web application security: it can take advantage of manually labeled data to bring the human understanding of the web application semantics into automated analysis tools. We use our methodology in the design of Mitch, the first ML solution for the black-box detection of Cross-Site Request Forgery (CSRF) vulnerabilities. Mitch allowed us to identify 35 new CSRFs on 20 major websites and 3 new CSRFs on production software.

Keywords: Surveillance Camera, CCTV, Object tracking.

UGC AUTONOMOUS

Food Detection using Classification with Convolutional Neural Network

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ABSTRACT

Food image classification is an emerging research field due to its increasing benefits in the health and medical sectors. For sure, in the future automated food recognition tools will help in developing diet monitoring systems, calories estimation and so on. In this paper, automated methods of food classification using deep learning approaches are presented. SqueezeNet and VGG-16 Convolutional Neural Networks are used for food image classification. It is demonstrated that using data augmentation and by fine-tuning the hyperparameters, these networks exhibited much better performance, making these networks suitable for practical applications in health and medical fields. SqueezeNet being a lightweight network, is easier to deploy and often more desirable. Even with fewer parameters, SqueezeNet is able to achieve quite a good accuracy of 77.20%. Higher accuracy of food image classification is further achieved by extracting complex features of food images. The performance of automatic food image classification is further improved by the proposed VGG-16 network. Due to increased network depth, proposed VGG-16 has achieved significant improvement in accuracy up to 85.07%.

Keywords: Surveillance Camera, CCTV, Object tracking.

Prescription Image based Pharmacy Care Services

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ABSTRACT

In Taiwan, the patient gets their own medication; they must bring their own drug prescription and ask the pharmacist to adjust. The pharmacist has the duty to evaluate the repetitiveness of the drug, the interaction status and the record of communicating with the doctor, in order to assist the patient to have the optimization of the pharmacy service and the care resource integration. However, in the implementation, while the pharmacist performs health pharmacy care, it is not easy to record the drug prescription information of the patient, mainly because the pharmacy information content of the pharmacy care is very complicated. Therefore, the purpose of this study will be to use AI optical identification and AI learning techniques to identify the details of prescriptions and drug information and to establish an optical identification expert system and a pharmacy care database to allow pharmacists to perform pharmacy care services. Instantly record accurate patient medication information and give more accurate medication care. In research methods, this study cooperates with the Taiwan Pharmacists Association. This research implements system development and system import, Taiwan Pharmacists Association to implement drug prescription collection to provide artificial intelligence identification learning, as well as the verification and operational use of research and development results. The implementation of this plan has deepened the technology of artificial intelligence into the field of pharmacy care, using artificial intelligence identification technology, strengthening the pharmacist's implementation of drug judgment, cooperation, and home care services, and establishing a national standardized medical integration database. The integration of Taiwan's medical resources has the basis for cross-service cooperation.

Keywords: Surveillance Camera, CCTV, Object tracking.

Python Data Analysis for School Teaching

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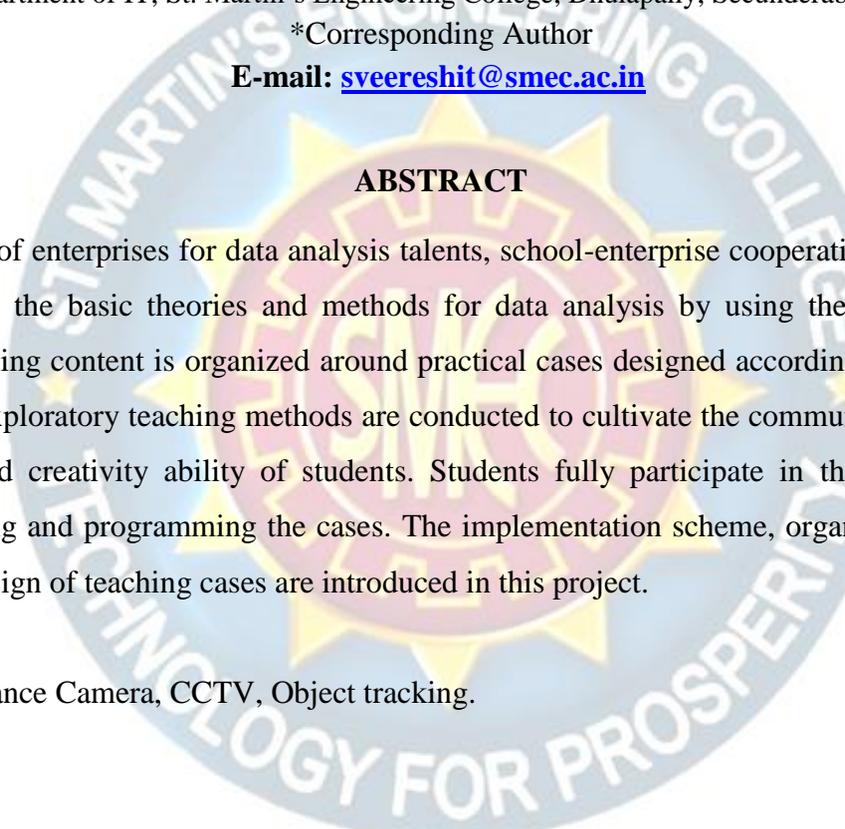
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ABSTRACT

To meet the needs of enterprises for data analysis talents, school-enterprise cooperative course Python Data Analysis introduces the basic theories and methods for data analysis by using the Python programming language. The teaching content is organized around practical cases designed according to the actual demand of the enterprise. Exploratory teaching methods are conducted to cultivate the communication, collaboration, critical thinking and creativity ability of students. Students fully participate in the teaching process by discussing, analyzing and programming the cases. The implementation scheme, organization of exploratory teaching and the design of teaching cases are introduced in this project.

Keywords: Surveillance Camera, CCTV, Object tracking.



UGC AUTONOMOUS

Student Scholarship Prediction using Machine Learning

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ABSTRACT

This Project consists of literature survey to prediction of scholarship by using Machine Learning and Data Mining technique. Along with this it contains a small description of ML/DM which are used by the researchers. It also describes data sets as very important in ML/DM methods. Machine Learning becomes most popular in the field of IT industry. Nowadays Machine Learning and Data Mining turn as a powerful technique which applicable for various fields such as IT, Education sector and also in business sector too. The different types of ML/DM algorithms are addressed by using all this technique. The algorithms which give more accuracy results in detection of continuity of every student’s scholarship such as Naïve Bayes, Decision Tree and k-NN. Finally, the proposed model will provide a list of candidates, who deserve to have a scholarship and also discussion has been made on accuracy of each techniques which was used to get a result.

Keywords: Surveillance Camera, CCTV, Object tracking.

Alzheimer Prediction using Machine Learning

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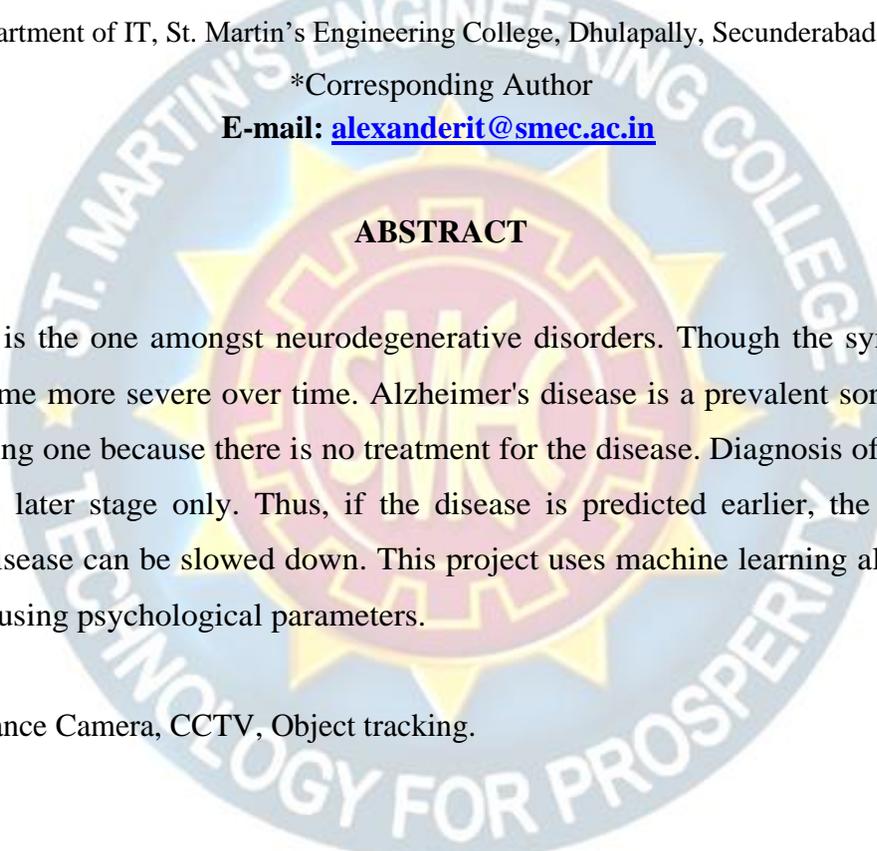
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ABSTRACT

Alzheimer disease is the one amongst neurodegenerative disorders. Though the symptoms are benign initially, they become more severe over time. Alzheimer's disease is a prevalent sort of dementia. This disease is challenging one because there is no treatment for the disease. Diagnosis of the disease is done but that too at the later stage only. Thus, if the disease is predicted earlier, the progression or the symptoms of the disease can be slowed down. This project uses machine learning algorithms to predict Alzheimer disease using psychological parameters.

Keywords: Surveillance Camera, CCTV, Object tracking.



UGC AUTONOMOUS

Drowsiness Detection using Live Stream

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ABSTRACT

The advancement in computer vision has assisted drivers in the form of automatic self-driving cars etc. The misadventures are caused by driver's fatigue and drowsiness about 20%. It poses a serious problem for which several approaches were proposed. However, they are not suitable for real-time processing. The major challenges faced by these methods are robustness to handle variation in human face and lightning conditions. We aim to implement an intelligent processing system that can reduce road accidents drastically. This approach enables us to identify driver's face characteristics like eye closure percentage, eye-mouth aspect ratios, blink rate, yawning, head movement, etc. In this system, the driver is continuously monitored by using a webcam. The driver's face and the eye are detected using haar cascade classifiers. Eye images are extracted and fed to Custom designed Convolutional Neural Network for classifying whether both left and right eye are closed. Based on the classification, the eye closure score is calculated. If the driver is found to be drowsy, an alarm will be triggered.

Keywords: Surveillance Camera, CCTV, Object tracking.

Detection of Accidents in Surveillance Video

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ABSTRACT

In this paper Object Detection and Tracking System (ODTS) in combination with a well-known deep learning network, Faster Regional Convolution Neural Network (Faster R-CNN), for Object Detection and Conventional Object Tracking algorithm will be introduced and applied for automatic detection and monitoring of unexpected events on CCTVs in tunnels, which are likely to (1) Wrong-Way Driving (WWD), (2) Stop, (3) Person out of vehicle in tunnel (4) Fire. ODTS accepts a video frame in time as an input to obtain Bounding Box (BBox) results by Object Detection and compares the BBoxes of the current and previous video frames to assign a unique ID number to each moving and detected object. This system makes it possible to track a moving object in time, which is not usual to be achieved in conventional object detection frameworks. A deep learning model in ODTS was trained with a dataset of event images in tunnels to Average Precision (AP) values of 0.8479, 0.7161 and 0.9085 for target objects: Car, Person, and Fire, respectively. Then, based on trained deep learning model, the ODTS based Tunnel CCTV Accident Detection System was tested using four accident videos which including each accident. As a result, the system can detect all accidents within 10 seconds. The more important point is that the detection capacity of ODTS could be enhanced automatically without any changes in the program codes as the training dataset becomes rich.

Keywords: Surveillance Camera, CCTV, Object tracking.

International Stock Price Prediction Using Neural Networks

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ABSTRACT

The stock market is one of the best channels for financial development, requiring a high degree of accuracy in predicting trades. This subject needs some technical skills and experience to achieve the best result. This paper represents a tuned Python console program based on the Neural Network (NN) and Artificial Intelligence (AI) to predict future prices in a qualified and quantized way with high accuracy and close to accuracy. The ideas implemented in this paper combine AI and NN models in the Python console system with a security shell that uses voice and a PIN to authenticate the user. It has the cross-platform capability and supports Stock prices and Cryptocurrencies, their predictions. This program allows users to duplicate the final data in their email. The proposed approach presents the influence of AI and machine learning in future projections. This system can be used in all subjects, including past time databases. The proposed method leverages the power of artificial intelligence and machine learning to effectively predict the prices of Stocks, thus providing investors and users with valuable information for their decision-making processes.

Keywords: Quality of Service, API, Packet Loss.

Divorce Case Prediction using Artificial Intelligence

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ABSTRACT

The number of divorce cases are increasing very rapidly all over the world. In the last few decades, the number of divorces have gone up from 1 in 1000 to 13 in 1000 in India. Due to this reason, it is a major concern for marriage counsellors and therapists. Therefore, an effective divorce prediction technique is needed that helps a marriage counsellor or a therapist to identify how severe a case is. In this work, we present a project on divorce case prediction using the existing machine learning algorithms. We have applied the Perceptron classifier, Decision Tree classifier, Random Forest classifier, Naive Bayes classifier, K-Nearest Neighbor classifier and Support Vector Machine classifier for prediction of divorce cases, and determined the best accuracy by comparing these algorithms. The criteria employed in this project makes use of Gottman method to make the predictions. The algorithms after the training will predict whether the divorce will occur or not. This can help the therapist to analyze how tense the situation is between a couple and hence counsel them accordingly. We have achieved the highest accuracy of 98.5% with Perceptron model.

Keywords: Quality of Service, API, Packet Loss.

Wheat Production using Artificial Intelligence Models and Its Comparative Analysis for Better Results

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ABSTRACT

These day's farmers are facing crop yield prediction problem which is an emerging problem in the society. This paper focus on the prominent wheat yield prediction using two Artificial Intelligence (AI) models and its comparative analysis for better prediction of crop yield. This paper compares the two different artificial intelligence models to predict the yield of wheat crop. Farmers are faced with many problems to estimate the yield of the crops. our project will help the crofters to predict the yield of wheat crop. The random forest algorithm gives 0.999R2 score and the artificial neural network gives 11.1782 loss. The forecast performance of the random forest algorithm is better than the artificial neural network.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

Stress Detection using Image Classification

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ABSTRACT

The main motive of our project is to detect stress in the IT professionals using vivid Machine learning and Image processing techniques. Our system is an upgraded version of the old stress detection systems which excluded the live detection and the personal counseling, but this system comprises of live detection and periodic analysis of employees and detecting physical as well as mental stress levels in his/her by providing them with proper remedies for managing stress by providing survey form periodically. Our system mainly focuses on managing stress and making the working environment healthy and spontaneous for the employees and to get the best out of them during working hours.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

Anomaly Detection in Surveillance System using Machine Learning Techniques- A Sate of the Art

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Real-time surveillance systems are in high demand because of the expanding needs of cities and industries. An AI-based anomaly identification system only handles some of the challenges, mainly by neglecting the time-varying character of aberrant or abnormal behaviour. Anomaly identification techniques also have the additional issue of requiring a training dataset with established normalcy and known error levels. In this study, we perform a literature review that is only partially exhaustive of previous research that applies machine learning strategies to the problem of identifying anomalies in surveillance footage. We conducted a qualitative analysis of 118 papers by using Google Scholar in conjunction with four other search criteria. One of the most significant discoveries was that the motivation behind the ongoing research is the objective of reducing reliance on data that has been labelled. Deep learning and fuzzy systems are two examples of areas that could potentially benefit from machine learning's application, which has been the subject of an in-depth and fruitful study.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

Investigation of Energy Efficient Clustering Algorithm and Route Distribution among Routing Protocols for VANET

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Due to the dynamically changing topologies of VANET networks, route distribution in high traffic vehicles remains a major challenge. The majority of VANET routing protocols are vulnerable to various types of routing communication. Using advanced routing protocols, nodes in the VANET routing protocol determine the best path to the destination node. However, due to recent routing protocols' Intelligent Transport System safety features, wireless ad-hoc networks may frequently break the link due to network delay node distribution. One of these primary focuses is on motor communication versus network integrity with high mobility of nodes in all network data packets. The NS-2 is used for these simulations, I tried to find a response system by simulating various wireless ad-hoc network routing protocols. Various popular Cluster Based Routing protocols are used to assess overall performance. However, it is vulnerable to the well-known VANET node stability, in which a grouping node falsely advertises good paths to a destination node during the route discovery process [4]. This study presents a heterogeneous ring clustering network communication architecture with equal area in each ring in an attempt to solve the equal energy balance problem in original RPL. A clustering algorithm and event-driven cluster head rotation mechanism are also based on dynamic topology. The clustering information message passing, and acknowledgment processes were designed in accordance with the defined Request for Comment and original Routing Protocol for LLNs message structure. The Energy-Efficient Heterogeneous Ring Clustering routing protocol for Vehicular Ad hoc networks is then established, along with the corresponding routing algorithms and maintenance methods. The Energy Efficient heterogeneous routing protocol more effectively balances the energy consumption of the Vehicular Ad hoc network, reducing both node energy consumption and the number of control messages. When a group of high mobility nodes collaborate, this process becomes more energy efficient. Because of the problem of fast topology changes, this approach was modified and an alternate path was implemented, and data loss was very low in the modified approach, which improved the existing one algorithm [11][13].

Keywords: RPL, traffic, routing system, VANET, clustering, distribution, energy efficiency.

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Predictive Analytics Research on Classification Techniques

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ABSTRACT

The process of obtaining useful information from enormous amounts of data is referred to as "data mining." Approaches to data mining include things like classification, association rules, and clustering, among other things. The process of data mining typically consists of four stages: locating data sources, extrapolating or accumulating data, modelling, and delivering module solutions. The purpose of the classification process in data mining is to make predictions about the groups to which individual data instances belong. It's a technique that can be helpful in data mining, and it has a wide range of applications for categorising the many kinds of data that are utilised in practically every field. The act of assigning a class label to a predetermined group of cases is what we mean when we talk about classification. The Bayesian classification, rules-based classification, decision trees, and neural networks are the two types of classification systems that we would like to discuss in this survey.

Keywords: Quality of Service, API, Packet Loss.

Voice Controlled Lights and Electrical Appliances using IOT

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ABSTRACT

Voice recognition is an expanding trend nowadays for automation. As speech is the preferred mode of operation for human being, this paper highlights the importance of human voice that activates electrical appliances at home in wireless environment. The user makes use of voice commands to perform certain actions such as switching the lights ON/OFF and regulating the speed of appliances. This system plays an important role for the elderly and physically disables people to control their appliances in intuitive and flexible way. The graphical user interface (GUI) system is developed using LabVIEW. LabVIEW is a highly productive development environment that interacts with real-world data for creating custom applications. So the method of control of electrical appliances is implemented using LabVIEW. With this voice recognition technique accuracy of more than 90% is achieved.

Key words: Automation, Voice recognition, Lab VIEW, ON/OFF control, Speed regulation.



UGC AUTONOMOUS

Development of An Easy Payment System Using IOT

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ABSTRACT

Internet users are growing rapidly day by day around the world. so the needs of consumers interms of making payments has changed drastically. Paying cash is a thing of past. Digital payments are making the waves now. E-wallet has become a great potential in the e-commerce market. More and more users show preference in E-wallet transaction rather than using cash in hand. However, the usage of E-wallets has been in question.

This paper evaluates the positive and negative impacts of E-wallet to users. E-wallet is a software application that uses electronic devices such as computers or mobile devices for online transactions. E-wallet is also a payable device without the use of cash or money. This helps the seller to collect the customer’s payment through the use of the unique two-dimensional quick-response code, also known as (QR) code that the seller generates. For example, Grab pay, Boost, Touch n Go e-wallet, Alipay, Google pay and so on. If the customer wants to use this method of payment, they will need to install the Mobile app to begin the payments and services. They can purchase the payment of their products by scanning the QRcode using the relevant app. In contrast, there are two types of QR code that are mostly available in the market. For example, Dynamic QR code and Static QR code. For dynamic QR code, it means that buyer not really need to enter the purchase amount for QR payment because the account details and transaction amount are fixed into the QR code. A Digital wallet offers greater protection against fraudulent purchases. Digital wallets use a unique number and transaction code for purchases. When you pay in a store, the card number isn’t shared with the merchant. A person can make use of mobile wallets in different application are as depending upon his need and preferences; It can be used for booking tickets for buses, cabs, flights, hotel rooms etc. In addition to all this, it can be used for recharging bills, mobile phones, DTH services. The popularity of E-wallet depends on the users perception on its security, so winning the audience trust is the crucial first step.

Key words: Digital wallet ,online payment services, QR Code, online shopping, E-wallet app, Google pay

Fingerprint Sensor

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ABSTRACT

The internet of things (IoT) is a network of interconnected physical objects that collect and exchange information and data over the internet. The way in which devices are interlinked, the computations can be processed exclusively by these objects and the data which was stored in the cloud disclosed in more conglomerate way. Data collection (BI, Big Data, CDPs, etc.) provides valuable information about customer behaviors, interests and preferences, and this has been referred to as the internet of behaviour (IoB).

It looks around to address how to sympathize the data as the question arises immediately, and how to apply that sympathized data to bring into existence and new products should be marketed, all are from a human psychological point of view. With the analyzed results it enlightens new ways for designing of a search experience optimization (SXO), user experience (UX), and the way how to market the services offered by companies and their end products. Consequently, for a company to conduct IoB is technically simple, but psychologically complex.



UGC AUTONOMOUS

Monitoring System of Taxis

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ABSTRACT

“An intelligent real time monitoring vehicle system for taxis” is a real time monitoring smart vehicle unit. According to the needs of the security operation taxi, a kind of vehicle monitoring terminal device which takes C8051F040 microcontroller as the core, combining GPS, GPRS and LCD was proposed. This device will show the superiority of C8051F040 microcontroller, which is high-speed, low-power, and has rich interface. Through the application of GPS, LCD, and the GPRS module which communicate with the monitor center, the device may realize functions such as vehicles localization, vehicles monitoring and dispatching etc. This paper describes hardware design and flow process of related procedure in detail.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

Smart Dustbin using IOT – A Detailed Review

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ABSTRACT

In the recent decades, Urbanization has increased tremendously. At the same phase there is an increase in waste production. Waste management has been a crucial issue to be considered. This paper is a way to achieve this good cause. In this paper, smart bin is built on a microcontroller-based platform Arduino Uno board which is interfaced with GSM modem and Ultrasonic sensor. Ultrasonic sensor is placed at the top of the dustbin which will measure the stature of the dustbin. The threshold stature is set as 10cm. Arduino will be programmed in such a way that when the dustbin is being filled, the remaining height from the threshold height will be displayed. Once the garbage reaches the threshold level ultrasonic sensor will trigger the GSM modem which will continuously alert the required authority until the garbage in the dustbin is squashed. Once the dustbin is squashed, people can reuse the dustbin. At regular intervals dustbin will be squashed. Once these smart bins are implemented on a large scale, by replacing our traditional bins present today, waste can be managed efficiently as it avoids unnecessary lumping of wastes on roadside. Foul smell from these rotten wastes that remain untreated for a long time, due to negligence of authorities and carelessness of public may lead to long term problems. Breeding of insects and mosquitoes can create nuisance around promoting unclean environment. This may even cause dreadful diseases

UGC AUTONOMOUS

An Analysis of Classification Algorithms for Data Mining

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ABSTRACT

Data mining is a process of gaining insight from previously untapped data by examining it from a variety of angles and synthesizing the results. The process of classifying data into predetermined groups or categories is called classification, and it may be performed using a machine learning-supported data processing technique. The purpose of classification is to generalize data consistently based on various instances. k-nearest neighbour, naive bays, support vector machines, and neural networks are just some of the most common classification algorithms used today. This paper offers a thorough comparison of numerous classification algorithms, detailing both their strengths and weaknesses.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

The State of Cloud Security with Machine Learning

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ABSTRACT

The term "cloud computing" is used to describe a specific model of data processing in which services are made available to users on demand regardless of where those resources are physically located. To cut costs, provide an infrastructure, a development platform, process data, analyse data, etc., practically every business today uses this computing technology. The services provided by CSPs are more accessible than ever before thanks to the widespread availability of web applications. Many studies have been performed using a variety of technologies with the goal of finding the best method of protecting the cloud infrastructure from malicious attacks. Recently, machine learning has proven to be a useful tool for cloud security. Machine learning algorithms are trained on the many legitimate datasets to develop models, automating the process of identifying cloud assaults with higher accuracy than any other technology. This article provides a summary of some of the most recent research on the topic of using machine learning to safeguard cloud infrastructure against cyber-attacks.

Keywords: Quality of Service, API, Packet Loss.

Mobile Application-Based Blood Donation System with Augmented Features

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ABSTRACT

The principal objective of this project is to save lives via blood donation. Users of our project can find out more about registered blood donors, also including their names, addresses, and other confidential info, as well as blood group information. Users must register with the appropriate perspective type, and already registered users must login. Requiring user authentication offers security. This app makes it easy to choose a location or right away based on their GPS location. This application significantly cuts down on the amount of time needed to obtain blood from blood banks and hospitals. As a result, using blood group information, this tool aids in rapidly choosing the correct donor. This system reduces the amount of time consumed actively seeking a compatible donor and upholding blood flow. As a result, this application gives more details fast and aids in decision-making. The project's scope is to give the user a lot of capabilities in a short amount of time. It offers stylish online blood management for donors. This project's primary goal include validating and storing diverse data and information about blood donations made.

Keywords: Quality of Service, API, Packet Loss.

Performance Analysis of AODV, DSR, and DSDV Protocols in Relation to Network Size and Node Density

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ABSTRACT

MANET is an emerging approach to wireless communication with potential applications in random and dynamic environments. MANETs do not have central administrator due to mobility of nodes and frequent breakage of links among nodes. Absence of central administrator makes the routing in MANETs a very challenging task. Many routing protocols for MANETs have been developed and reported in the literature but they still lack in performance. With this motivation, three widely used routing protocols viz. AODV, DSR and DSDV protocols are selected for their performance evaluation by considering the variation in network size, routing energy consumption and density of nodes. A simulation model with scenario of (50-500) nodes along with 8 UDP connections is designed and implemented on NS2 simulator to study inter-layer interactions and performance of the protocols are analyzed and experimental results show that DSR performs better as compared to DSDV and DSR.

Keywords: Quality of Service, API, Packet Loss.

A Statistical Analysis on Polycystic Ovary Syndrome (PCOS) Detection in Women Body Using Medical Image Processing and Machine Learning Approach

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A hormonal imbalance, notably high levels of androgens (or "male" hormones) like DHT and testosterone, is what produces PCOS symptoms. Ovulation problems, irregular periods, infertility, and common symptoms like acne and excessive hair growth can all result from these hormones being greater than they should be. The complex endocrine condition known as polycystic covary syndrome(PCOS) harms the health of women. of US females of reproductive of life, PCOS is responsiblefor6%to12%(uptofivemillionsinstances),makingitoneofthe most common causes of feminine infertility. But it goes far beyond that. The ovary develops many follicular cysts as aresult of the illness. Currently, doctors diagnose patients by manually counting the number of follicular cysts, which can cause issues with variability, repeatability, and low effectiveness. The ultrasound will be examined to determine whether follicles are present. The methods for image processing have helped to identify the traits such as follicle size, follicle count, and structure to reduce the workload and time required of clinicians. This paper contains a review of an overview of some recent studies in the field of health diagnostics. According to the reviews, investigation gaps, and research schemas, additional research is to be conducted.

Keywords: PCOS, Medical Image Processing, PCOD, SVM

IOT Based Wireless Advanced Home Automation System

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ABSTRACT

The project aims at designing an advanced home automation system using Wi-Fi technology. The devices can be switched ON/OFF using a Personal Computer (PC) through Wi-Fi. Automation with intruder detection system using IR sensor is the most frequently spelled term in the field of electronics. The hunger for automation brought many revolutions in the existing technologies. These had greater importance than any other technologies due to its user-friendly nature. These can be used as a replacement of the existing switches in home which produces sparks and also results in fire accidents in few situations. When the intruder detected it automatically alerts through buzzer and update the data into IoT server. Considering the advantages of Wi-Fi an advanced automation system was developed to control the appliances in the house. Wi-Fi (Short for Wireless Fidelity) is a wireless technology that uses radio frequency to transmit data through the air. Wi-Fi has initial speeds of 1 mbps to 2mbps. Wi-Fi transmits data in the frequency band of 2.4 GHz. It implements the concept of frequency division multiplexing technology. Range of Wi-Fi technology is 40-300 feet. The controlling device for the automation in the project is Arduino. The data sent from PC over Wi-Fi will be received by Wi-Fi module connected to Arduino Microcontroller. Arduino reads the data and decides the switching action of electrical devices connected to it through Relays. The Microcontroller is programmed used embedded 'C'.

Keywords: Quality of Service, API, Packet Loss.

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Biometric Authentication System

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ABSTRACT

Biometric systems are increasingly being adopted to improve security, convenience, and inclusion in society and to provide potential applications in various research and industrial fields. There are some Biometric authentications like Face recognition, Finger print and Voice recognition. Beside of this they have some limitations like unauthorized person can hack it. To overcome the limitations of the traditional biometric systems, electrocardiogram(ECG) has received the most attention from the biometrics community due to the highly individualized nature of the ECG signals and the fact that they are ubiquitous and difficult to counterfeit. This project introduces a framework for how to appropriately adopt and adjust machine learning (ML) techniques used to construct electrocardiogram (ECG)-based biometric authentication schemes. In this paper, we contribute to creating a new large gallery off-the person ECG datasets

Keywords: PCOS, Medical Image Processing, PCOD, SVM

Information Retrieval through Fused Search Engine with Particle Swarm Optimization and K-Means Algorithms

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ABSTRACT

Most of the internet users are having very big expectation about their query's results from the Search Engines (SE). The different search engines are following different strategies to extract the documents regarding user queries. SE are providing related details, sometime not satisfying the actual expectation of the users. In order to satisfy this gap, we proposed the hybrid technique such as Particle Swarm Optimization (PSO) and the K-means|| algorithm to make an efficient resultant document list than the traditional Information Retrieval (IR) algorithms. The K-means|| algorithm does better initialization over clusters and PSO picks the most suitable document from the retrieved list at each stage. Here, we have considered three most popular SE such as Google, Bing and Yahoo. The Segmentation fusion technique is applied to combine the documents from the different engines. The proposed system's performance is evaluated with purity and F-measure, which shows the improved relevancy about information trapping.

Keywords: Information Retrieval, K-means|| algorithm, Particle Swarm Optimization and Search Engines.

UGC AUTONOMOUS

Covid -19 Authentication Systems

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ABSTRACT

Covid-19 is one of the biggest pandemic till date, by which people are afraid to come out of their houses, travel to other places, send children to school and to buy food or groceries from shops. there are certain precautions we must follow in order to avoid covid they are wearing masks, using sanitizers, maintaining social distances with people, not touching the face frequently etc. in this kind of situation mall/shop owners also need to provide safety to the customers like allowing limited no of people into shops/malls, check whether customers are wearing masks and maintaining social distance or not. to check the above safety measures we use technology instead of using people we use machine learning, computer vision and iot. whenever a person enters any premises he or she will be checked using a camera whether the person is wearing the mask or not, body temperature of the person is also detected and if the person is wearing a mask and body temperature is in limit then the person is allowed into the premises. this also keeps count of the people coming into the premises if the count exceeds then the person is not allowed.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

Online food ordering system

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ABSTRACT

The purpose of Online Food Ordering System is to automate the existing manual system by the help of computerized equipment’s and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with Online Food Ordering System, as described above, can lead to error free ,secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant entries. That means that one need not be distracted by information that is not relevant, while being able to reach the information. The aim is to automate its existing manual system by the help of computerized equipment’s and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same.

UGC AUTONOMOUS

Review of Data Integrity in Cloud Storage

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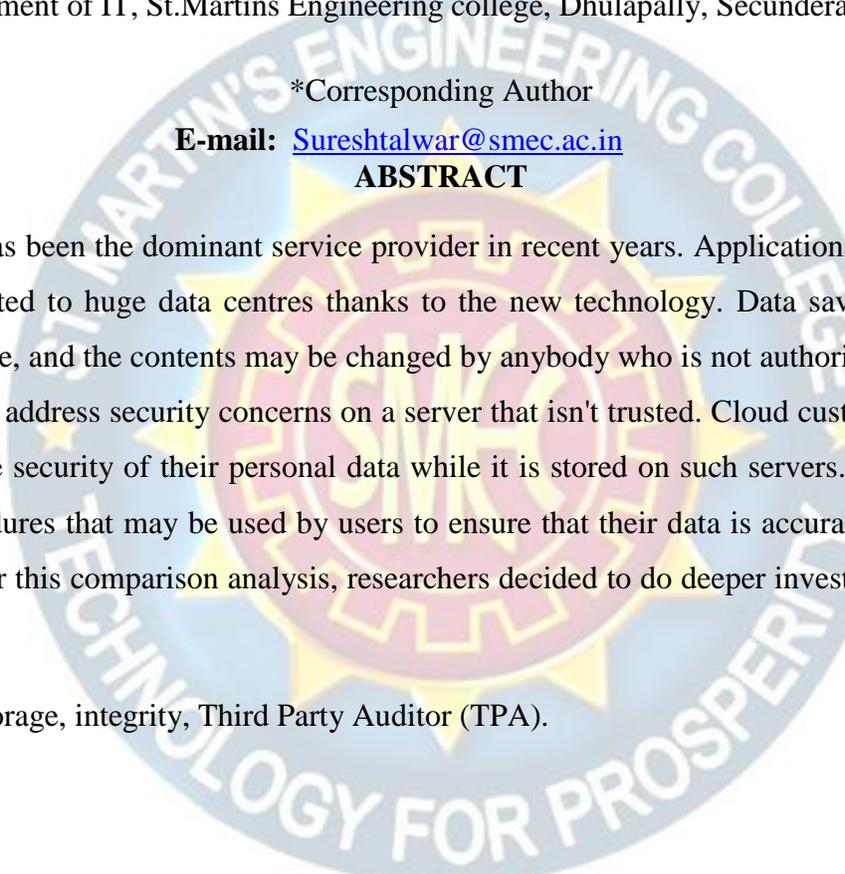
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ABSTRACT

Cloud computing has been the dominant service provider in recent years. Applications and critical databases may now be relocated to huge data centres thanks to the new technology. Data saved in the cloud is not guaranteed to be safe, and the contents may be changed by anybody who is not authorised to do so. There are a variety of ways to address security concerns on a server that isn't trusted. Cloud customers are increasingly concerned about the security of their personal data while it is stored on such servers. There are a variety of methods and procedures that may be used by users to ensure that their data is accurate in the most efficient manner feasible. For this comparison analysis, researchers decided to do deeper investigation into cloud data integrity.

Keywords: cloud storage, integrity, Third Party Auditor (TPA).



UGC AUTONOMOUS

Wireless Power Transmission through Tesla Coil-A Detailed Review

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ABSTRACT

Wireless power transfer is the one which transmit electrical energy from source to the load without using any physical medium like wires. In wireless power transfer technique if power has to be transmitted over a short distance then it should be magnetic field using inductive coupling between coils of wire. This inductive coupling is able to charge the phone, electric vehicles, for the high input voltage it is capable of glowing the tube lights. This project extended the knowledge of electronics and shed some light on the artistic nature of the tesla coil. The coil that was created was capable of producing the electricity which had the capacity of glowing the tube light. While there are lots of developments could be made, our project mainly aims at generating the electricity wirelessly. Tesla coil is a cheap way of generating high voltage at high frequency without complicated circuitry. A tesla coil was used in some spark gap transmitter to generate radio frequency and it helps to shoot lightning bolts.

Keywords: Quality of Service, API, Packet Loss.

UGC AUTONOMOUS

Smart Voting System

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ABSTRACT

The word "vote" means to choose from a list, to elect or to determine. The main goal of voting is to come up with leaders of the people's choice. Most countries, Kenya not an exception have problems when it comes to voting. Some of the problems involved include rigging votes during election, insecure or inaccessible polling stations, inadequate polling materials and also inexperienced personnel. "ONLINE VOTING SYSTEM" is an online voting technique. In this system people who have citizenship of Kenya and whose age is above 18 years of age and any sex can give his\her vote online without going to any physical polling station There is a database which is maintained in which all the names of voters with complete information is stored. In "ONLINE VOTING SYSTEM" a voter can use his\her voting right online without any difficulty. He\She has to be registered first for him/her to vote. Registration is mainly done by the system administrator for security reasons. The system Administrator registers the voters on a special site of the system visited by him only by simply filling a registration form to register voter. Citizens seeking registration are expected to contact the system administrator to submit their details.

Keywords: Surveillance Camera, CCTV, Object tracking.

Flexible Conjugated Polymer Based Plastic Solar Cell

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ABSTRACT

Energy is the key input to drive and to improve the life cycle. The consumption of the energy is directly proportional to the progress of the mankind with ever growing population, improvement in the living standard of the humanity, industrialization of the developing countries like India. The global demand for energy is increasing on alarming rate. The primary source of energy is fossil fuel (like coal, diesel), which are decreasing day by day due to more energy demand and there is global warming problem due to these sources. So, we need non-conventional energy sources to full fill the demand of energy. This deals with basic principal of operation of plastic solar cells and we demonstrate the implementation of the nanorod and screen-printing technology in the fabrication of organic-based bulk hetero junction solar cells.

Keywords: Surveillance Camera, CCTV, Object tracking.

UGC AUTONOMOUS

Smart Gadget for Women Safety– A Detailed Review

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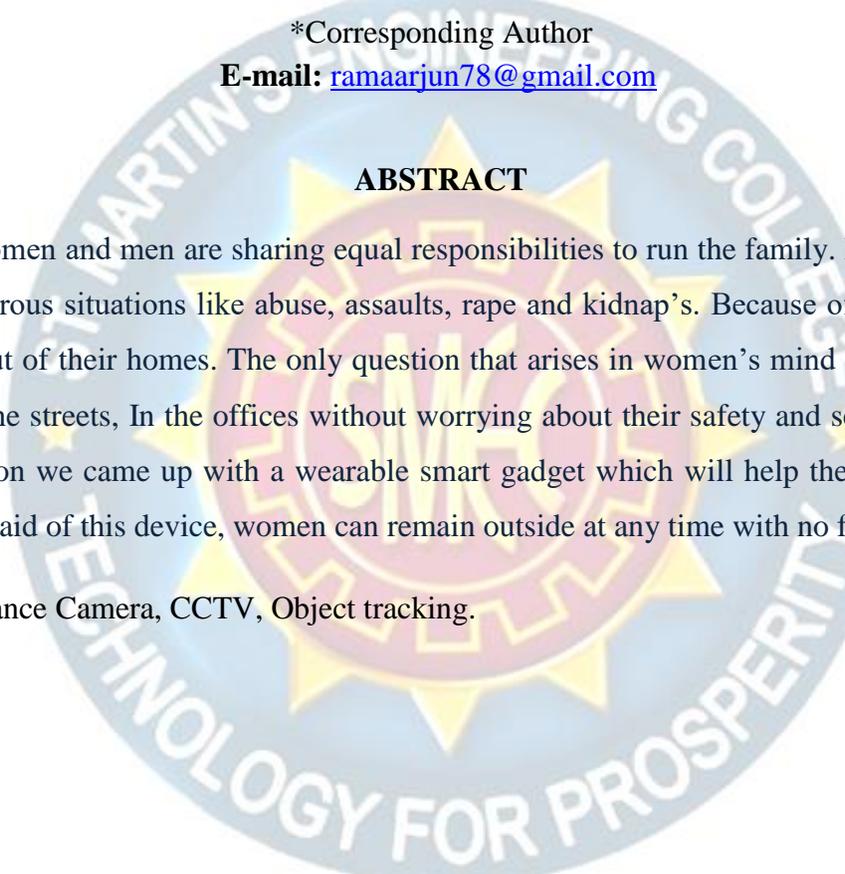
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ABSTRACT

In today’s world women and men are sharing equal responsibilities to run the family. Each day a women has to go through numerous situations like abuse, assaults, rape and kidnap’s. Because of these reasons women are not venturing out of their homes. The only question that arises in women’s mind is when they are going to move freely on the streets, In the offices without worrying about their safety and security even at the odd hours. For this reason we came up with a wearable smart gadget which will help them to face their critical situations. With the aid of this device, women can remain outside at any time with no fear.

Keywords: Surveillance Camera, CCTV, Object tracking.



UGC AUTONOMOUS

Smart Attendance (using C Program)

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ABSTRACT

The project work aims at designing a student attendance system which could effectively manage attendance of students of the department of Computer Science and Engineering allege; In this project work, attendance is marked after student's biometric identification. For student identification, a fingerprint recognition based identification system is used. Fingerprint features are considered to be the best and fastest method for biometric identification. These features are more secure to use and unique for every person that don't change in one's lifetime. Fingerprint recognition is a mature field today, but still identifying individual from a set of enrolled fingerprints is a time taking process. It was very necessary to improve the fingerprint identification system for implementation on large databases, e.g. of an institute or a country. In this project, the minutiae algorithm is used to develop the identification system which is faster in implementation than any other available today in the market. The proposed automated attendance system based on fingerprint recognition was tested on a class of student fingerprint databases and achieved significant results for taking an attendance of the students of the Department of Computer Science and Engineering. The proposed system has been implemented using C programming paradigm platform

Keywords: Surveillance Camera, CCTV, Object tracking.

Library Management System using Python

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ABSTRACT

Library management system is a project which aims in developing a computerized system to maintain all the daily work of Library. This project has many features which are generally not available in normal library management systems like facility of user login and a facility of Teachers login. It also has a facility of admin login through which the admin can monitor the whole system. It also has facility of an online notice board where teachers and student can put up information about workshops or seminars being held in our Colleges or nearby Colleges and librarian after proper verification from the concerned institution organizing the seminar can add it to the notice board. It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also the students can request the librarian to add new books by filling the book request form. The librarian after logging into his account i.e admin account can generate various reports such as student report, issue report, teacher report and book report. Over all this project is being developed to help the students as well as staff of library to maintain the library in the best way possible and also reduce the human efforts.

Keywords: Surveillance Camera, CCTV, Object tracking.

Bigdata Analytics -Review Paper

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ABSTRACT

In this modern era of computer’s, a large amount of data is available to decision makers. Big data doesn’t only refer to datasets that are big, but also high in velocity and variety, which is hard to handle using traditional tools and techniques. Due to speedy growth of such data, some ways are necessary to found to get important knowledge and values from these data sets. Also, decision makers need to gain some valuable vision from such big and continuously changing data, ranging from daily transactions to customer interactions and data of social network. Such vision can be given using Big Data Analytics, which is the application of Advanced Analytics Technique on big data. This paper aims to study some of the dis-similar analytics methods and tools which can be applied to big data, as well as the charge provided by the applications of big data analytics in different decision domain.

Keywords: Surveillance Camera, CCTV, Object tracking.

Talking Dictionary Using Python

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ABSTRACT

Dictionary is one of the important media in learning English. It can be a handy tool. A dictionary can be used for various purposes, such as enriching vocabulary, improving grammar or to improve one’s knowledge. Along with the rapid development of technology at this time, the various applications are widely developed as a medium of learning, therefore developing a dictionary application can be one of the best learning media. Dictionary application can be more practical than conventional dictionaries, as users can receive information quickly anywhere without space and time constraints. Based on this concept, the project aims to create a Dictionary Application using Python. The main objective of this project is to develop an interest in words and language, learn how the dictionaries work, and make the search of words and spellings easier and more convenient than compared to the conventional dictionaries and listen to the pronunciation of the word and its meaning.

Keywords: Surveillance Camera, CCTV, Object tracking.

UGC AUTONOMOUS

AI Assistant

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ABSTRACT

Virtual assistants are software programs that continue to make chores simpler for you by providing weather updates, setting reminders, preparing grocery lists, etc. They can be instructed verbally or through chat bots on the internet. An inciting phrase or wake word is required for voice-based intelligent assistants, followed by the command, in order to activate the listener. This system is made to work effectively on desktop computers. Personal assistant software increases user productivity by taking care of the user's repetitive duties and by giving them information from web sources. Individuals today interface with technology in novel ways due to personal assistants, conversational interfaces, and chat bots. A personal virtual assistant may even perform certain basic duties like launching apps, reading out news, taking notes, etc. with just a voice command. Users can ask inquiries to them in the same way they would to a real person. Personal assistants like Siri, Google Assistant, and Alexa operate on text-to-speech technology and speech recognition

Keywords: Quality of Service, API, Packet Loss.



UGC AUTONOMOUS

LPG Monitoring and Leakage Detector System

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ABSTRACT

LPG gas detection projects main idea is to implement security system for detecting leakage of gas in closed environment. In this project gas leakage is identified by using sensors which works only in closed environment. In present situation there are many cases related to gas leakage which causes innocent people lives and property damage. Implementing this application can be useful for companies, houses, which can save lives of people. This can be used as an application in chemical and hazardous industries where there is a continuous need of monitoring the gas leaks.

Keywords: LPG (Liquid Petroleum Gas), leakage, environment.



UGC AUTONOMOUS

Block Chain Based Architecture and Solution for Secure Digital Payments

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ABSTRACT

Payment systems have undergone significant modifications as a result of the development of internet technology, from entity exchange to online banking. Virtually every industry has undergone the transition from traditional to digital technologies. Making payments has never been simpler thanks to the development of online payment and digital wallet systems like UPI, and as demand for these services rises, so does the number of people using immediate money transfer systems. However, the current online payment system has problems with insider problem, transparency, and single point of failure. In order to reduce risks and cost inefficiencies, security is also essential for such online payments. A private and permissioned block chain-based payment system for the Indian financial industry is proposed in this project.

Keywords: Surveillance Camera, CCTV, Object tracking.

A MANET Routing Protocol Survey

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ABSTRACT

The increment in accessibility and prominence of portable remote gadgets has lead specialists to add to a wide mixed bag of Mobile Ad-hoc NETworking (MANET) conventions to abuse the novel correspondence opportunities introduced by these gadgets. Gadgets have the capacity to impart straightforwardly utilizing the remote range as a part of a distributed design, and course messages through transitional hubs, however the way of remote shared correspondence and cell phones result in numerous steering and security challenges which must be tended to before sending a MANET. In this paper here explore the scope of MANET steering conventions accessible and talk about the functionalities of a few running from ahead of schedule conventions, for example, DSDV to more progressed, for example, MAODV, our convention study centers upon works by Perkins in creating and enhancing MANET directing. A scope of writing identifying with the field of MANET steering was recognized and checked on, investigated writing on the subject of securing AODV based MANETs as this may be the most famous MANET convention. The writing survey recognized various patterns inside of examination papers, for example, selective utilization of the irregular waypoint portability model, barring key measurements from recreation results and not contrasting convention execution against accessible options.

Keywords: Surveillance Camera, CCTV, Object tracking.

Switch On/Off by Clapping Hands

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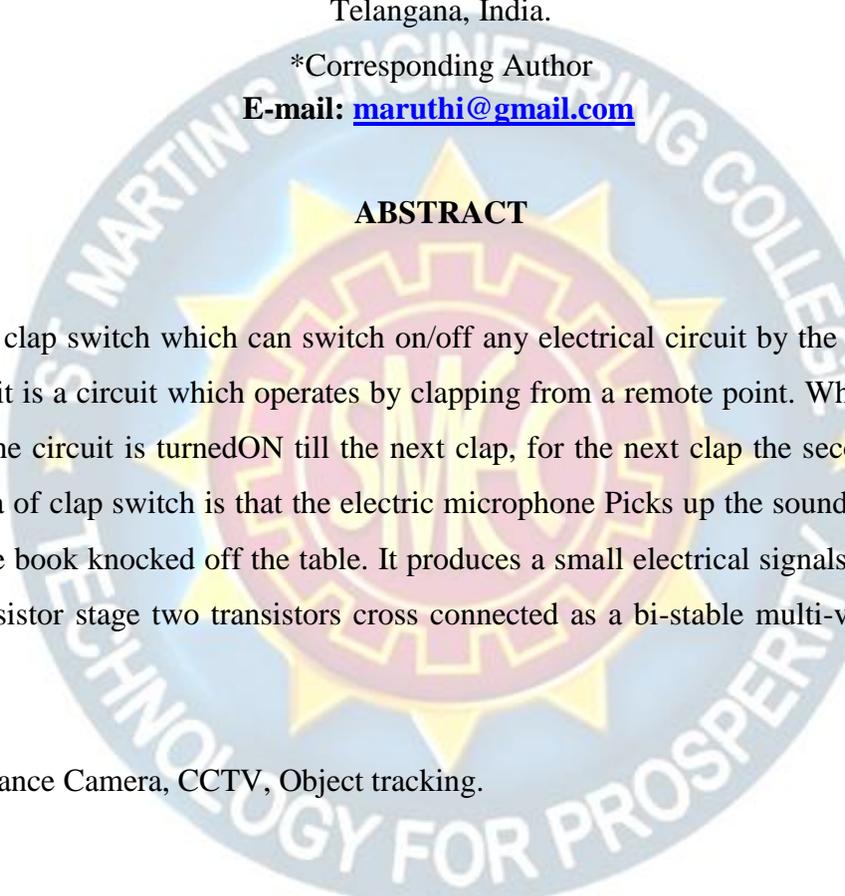
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ABSTRACT

This is a project on clap switch which can switch on/off any electrical circuit by the sound of the clap. The clap-operated Circuit is a circuit which operates by clapping from a remote point. When a person clap once, the first output of the circuit is turned ON till the next clap, for the next clap the second output is switched OFF. The basic idea of clap switch is that the electric microphone Picks up the sound of your clap, coughs, and the sound of the book knocked off the table. It produces a small electrical signals which Is amplified by the succeeding transistor stage two transistors cross connected as a bi-stable multi-vibrator change state at each signals.

Keywords: Surveillance Camera, CCTV, Object tracking.



UGC AUTONOMOUS

Sanitizer Dispenser (without Aurdino)

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ABSTRACT

The Automatic Sanitizer Dispenser Machine is an infrared movement sensor-based dispenser machine. It used to dispense any alcohol-based liquid, called sanitizer. It has a touch-less activity, which makes user fearless and comfortable about the sanitization procedure. Another name of this Automatic Sanitizer Dispenser Machine is a contact-less or touchless sanitizer dispenser machine. Because of the inbuilt movement sensor, it detects the hand movement underneath the metal nozzle and opens the valve to dispenser sanitizer. The essence of using contact-free hand sanitizer dispensers was realized all over the world. This work primarily focuses on developing a fast, efficient, and a hassle-free method for hand sanitization in large public gatherings. An Infra-Red (IR) sensor-based automatic hand sanitizer dispensing device which uses alcohol-based sanitizer and locally available materials and components with basic functionality was developed. An Extended Reality (XR) approach was employed in design and assembly steps for visualization purposes. This cost-effective contact-free device can be quickly replicated remotely and can be immediately pressed into actions, particularly in rural parts of India to fight the COVID-19 pandemic effectively.

Keywords: Surveillance Camera, CCTV, Object tracking.

Comparative study between decision tree and KNN of data mining classification technique

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ABSTRACT

Data mining is used to discover hidden information using some process, techniques, and its algorithm. Data mining is a very beneficial method to analyze critical data. Many Researchers and organizations use data mining to extract useful knowledge regarding their need. Data mining has many techniques. For example, Classification, Clustering, Regression, Association, Summarization, Time- series etc. Each technique has some algorithms like classification has a decision tree, Naïve Bayes, Neural Networks and so on and Clustering has K-means and so on. The comparative study between Decision tree Algorithm and K- Nearest Neighbor Algorithm of Classification techniques is present in this paper.

Keywords: Classification, Clustering, Regression.

UGC AUTONOMOUS

Biometric Authentication using Electrocardiogram

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ABSTRACT

Biometric systems are increasingly being adopted to improve security, convenience, and inclusion in society and to provide potential applications in various research and industrial fields. There are some biometric authentications like face recognition, finger print and voice recognitions. Beside of this they have some limitations like unauthorized person can hack it. To overcome the limitations of traditional Biometric systems, Electrocardiogram(ECG)have received the most attention from the Biometric community due to the highly individualized nature of ECG signals and the fact that they are ubiquitous and difficult to counterfeit. This project introduces a frame work for how to appropriately adopt and adjust machine learning (ML) Techniques used to construct the Electrocardiogram (ECG)-based Biometric authentication schemes.

Keywords: Surveillance Camera, CCTV, Object tracking.

UGC AUTONOMOUS

Online Examination Using Java

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ABSTRACT

This Online Examination System is a software solution, which allows any industry or institute to arrange, conduct and manage examinations via an online environment. It can be done through the Internet/Intranet and/Local Area Network environments. Some of the problems faced during manual examination systems are the delays in result processing, filing poses a problem, filtering of records is difficult. The chance of loss of records is high also record searching is difficult. This paper describes the principle of the system, presents the main functions of the system, analyses the auto-generating test paper algorithm, and discusses the security of the system.

Keywords: Surveillance Camera, CCTV, Object tracking.



Making a Search Engine

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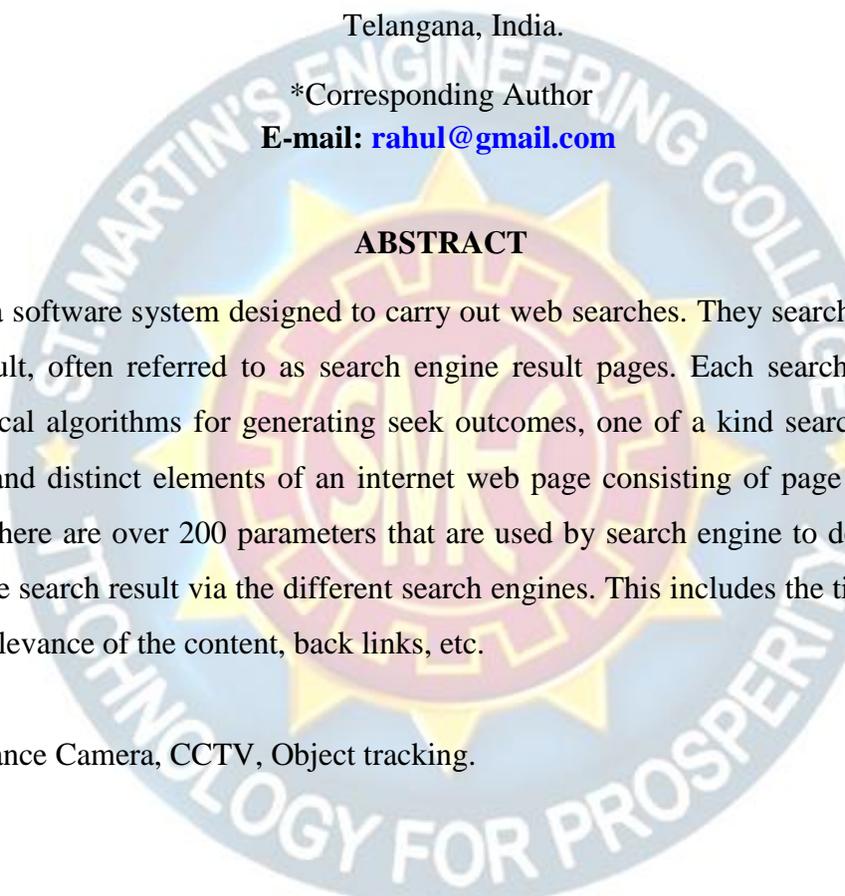
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ABSTRACT

A search engine is a software system designed to carry out web searches. They search the World Wide Web in a systematic result, often referred to as search engine result pages. Each search engine uses different complex mathematical algorithms for generating seek outcomes, one of a kind search engines like Google and Yahoo understand distinct elements of an internet web page consisting of page title, content material, Meta description. There are over 200 parameters that are used by search engine to determine the relevancy and popularity of the search result via the different search engines. This includes the title, keywords, density, Meta description, relevance of the content, back links, etc.

Keywords: Surveillance Camera, CCTV, Object tracking.



UGC AUTONOMOUS

Prediction of Human Mobility Based on Application-Collected Location Data

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Understanding human mobility benefits numerous applications such as urban planning, traffic control and city management. Previous work mainly focuses on modeling spatial and temporal patterns of human mobility. However, the semantics of trajectory are ignored, thus failing to model people’s motivation behind mobility. In this paper, we propose a novel semantics-aware mobility model that captures human mobility motivation using large-scale semantic-rich spatial-temporal data from location-based social networks. In our system, we first develop a multimodal embedding method to project user, location, time, and activity on the same embedding space in an unsupervised way while preserving original trajectory semantics. Then, we use hidden Markov model to learn latent states and transitions between them in the embedding space, which is the location embedding vector, to jointly consider spatial, temporal, and user motivations. In order to tackle the sparsity of individual mobility data, we further propose a von Mises-Fisher mixture clustering for user grouping so as to learn a reliable and fine-grained model for groups of users sharing mobility similarity. We evaluate our proposed method on two large-scale real-world datasets, where we validate the ability of our method to produce high-quality mobility models. We also conduct extensive experiments on the specific task of location prediction. The results show that our model outperforms state-of-the-art mobility models with higher prediction accuracy and much higher efficiency.

Keywords: User grouping, human mobility modeling, multimodal embedding, hidden Markov model

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Motion Detection Using Arduino and Pir

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ABSTRACT

In the proposed framework an astoundingly financially sharp and outrageous discernment structure will be made which will apparently perceive human nearness and trigger the Camera Module , which will begin recording the video and additional to it an outer drive comparably as send a notice on the android application concerning the advancement and in the mean time the client will all around likely watch the live stream of the entire scenario. It can be utilised at Homes also in the fields by the ranchers to recognisean kind of unapproved Human richness. PIR(Passive Infra Red) improvement sensor as the key sensor for advancement ID, GSM module for sending SMS and ringer for alarm. For programming framework utilising Arduino and GSM module. The outcome full fills, the advancement sensor read an information well and within two or three minutes it sends a notice to versatile applications.

Keywords: Arduino, gsm module, LED

A Privacy Protection Strategy in Wireless Sensor Networks

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ABSTRACT

Computing and communication have advanced dramatically as a result of recent developments in wireless sensor networks (WSNs). Security has not yet received the same priority to match these changes. In this study, we concentrate on the WSNs' source location secrecy problem, a current security development area, and provide a privacy and security technique in WSNs. This approach considers more powerful opponents who can evaluate the situation at the origin using a hidden Markov model. To deal with this sort of opponent, fake sources and phantom nodes are used to divert the transmission path by mimicking the actions of the origin. To choose the candidate for the next step, each access point's weight is employed as criteria. Moreover, transmitter and receiver nodes are intended to send original packets. According to the computation results, the suggested privacy protection strategy increases safety while using less energy.

UGC AUTONOMOUS

Routing Services in WSN for Processing Data Integrity and Differentiated Services

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ABSTRACT

A wireless network that is installed ad hoc and has no physical infrastructure and employs a large array uses wireless sensors to track systems, objects, or aspects is referred to as a "Wireless Sensor Network" (WSN). Emerging technologies are tackling the problems with wireless sensor networks in terms of cost, scalability, topology change, and power consumption. Different Quality of Service (QoS) specifications are extremely important for executing programmes on the identical wireless sensor network (WSN) infrastructure. superior data integrity and minimal latency are two fundamental needs. These two needs, however, often cannot be met at the same time. To address this problem, In this project, we advise IDDR, a multi-path dynamic routing mechanism. Data fidelity is strengthened for applications which require highest standards of integrity and end-to-end latency is dropped for the ones that require low levels of integrity based on the weight given to each packet, IDDR splits packets from applications with various QoS needs. We demonstrate that by using Lyapunov drift mechanism, IDDR is secure. The simulation's outcomes show that IDDR offers services with data integrity and latency differentiation.

Dual Access For Cloud-Based Data Storage And Sharing In AWS

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ABSTRACT

Data storage in cloud offered by Amazon Web Services (AWS) has recently caught the attention of both organizations and academics due to its efficient and affordable management. As they provide services via a public network, service providers must build secure information exchange and retrieval protocols to safeguard information security and consumer rights. Encryption is a method most frequently employed to guard against the compromise of sensitive data. To properly handle data, data encryption (like DES, for instance) is inadequate. Also, if download demand can be properly controlled, customers will not be able to receive a charge out of administration due to Economic Denial of Sustainability (EDoS) assaults. In this paper, we examine data access in connection to AWS cloud-based capacity and suggest a solution to manage information access and download demand neither compromising on security nor effectiveness. In this work, two dual access control mechanisms are built, one for each of the goal conditions. Discussions also include the experiment evaluation and the system integrity.

Keywords: AWS Cloud, data exchange, access management, Multi-User Access.

Smart Irrigation System using Internet of Things

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ABSTRACT

Large tracts of land are often under the control of farmers who cultivate a variety of crops. It's not always feasible for one person to continuously monitor the entire farmland. A certain area of land may occasionally receive more water, which could result in water logging, or much less water, or even none at all, which could result in dry soil. Crops may be harmed in either scenario, and farmers may incur losses. We therefore suggest an IOT Project to address this issue. The ability to monitor and manage the water supply makes this concept incredibly helpful. Therefore, the user should not be concerned that his plants or crops may suffer from water-logging or water shortage. While it may not be possible for a person to be constantly present at his or her garden, this project can be used to keep track of soil moisture, rain status and assure correct water supply. This technique can also be helpful for persons with small gardens.

Keywords—: User, Internet Of Things, Soil Moisture, Rain Status.



Monkeypox Detection Using Deep Learning

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ABSTRACT

Due to its quick spread across over 40 countries beyond Africa, the current outbreak of monkeypox has become a matter of public health significance. Detecting monkeypox through clinical means can be challenging, as it shares resemblances with chickenpox and measles. To facilitate quick and accurate diagnosis in the absence of confirmatory Polymerase Chain Reaction (PCR) testing, computer-assisted recognition of monkeypox lesions can prove beneficial. Recent advancements in deep learning have demonstrated high efficiency in automated identification of skin lesions, with sufficient training examples. In this research, we gathered the "Monkeypox Skin Lesion Dataset," which comprises images of skin lesions from monkeypox, chickenpox, and measles.

The majority of images were obtained from Kaggle and publicly accessible case reports. Following that, multiple pre-trained deep learning models are used to classify monkeypox and other diseases, including VGG-16, ResNet50, and InceptionV3. We also developed a model that uses all three models. Among the three models, ResNet50 demonstrated the highest overall accuracy of 83.96(4.77%), whereas VGG16 and the combined system achieved accuracies of 81.48(6.87%) and 79.26(1.05%), respectively. As an online monkeypox screening tool, a prototype web-application is currently being created. While collected preliminary results from this dataset are good, a bigger socioeconomically varied sample is needed to improve the generalization ability of these models.

Analyzing Electromyography (EMG) Signals with Machine Learning

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ABSTRACT

In this study, we will analyse EMG data using ml techniques. Electromyography (EMG) is a method employed in biomedical & biomechanics studies to quantify electrical impulses in myocytes. The mission's overarching goal is to create and assess ml algorithms for EMG signal analysis & processing, with the expectation that this will lead to better diagnostic and therapeutic results. Several unsupervised & supervised ml techniques will be investigated in this study to better identify trends in EMG information and make accurate findings. The findings of this study will enhance clinical & biomechanics studies by increasing our comprehension of the possibilities of ml in the processing of EMG data.

Keywords: ML, EMG, RF, NN, Supervised learning, Regression



UGC AUTONOMOUS

Detection of Fake Currency using Deep Learning

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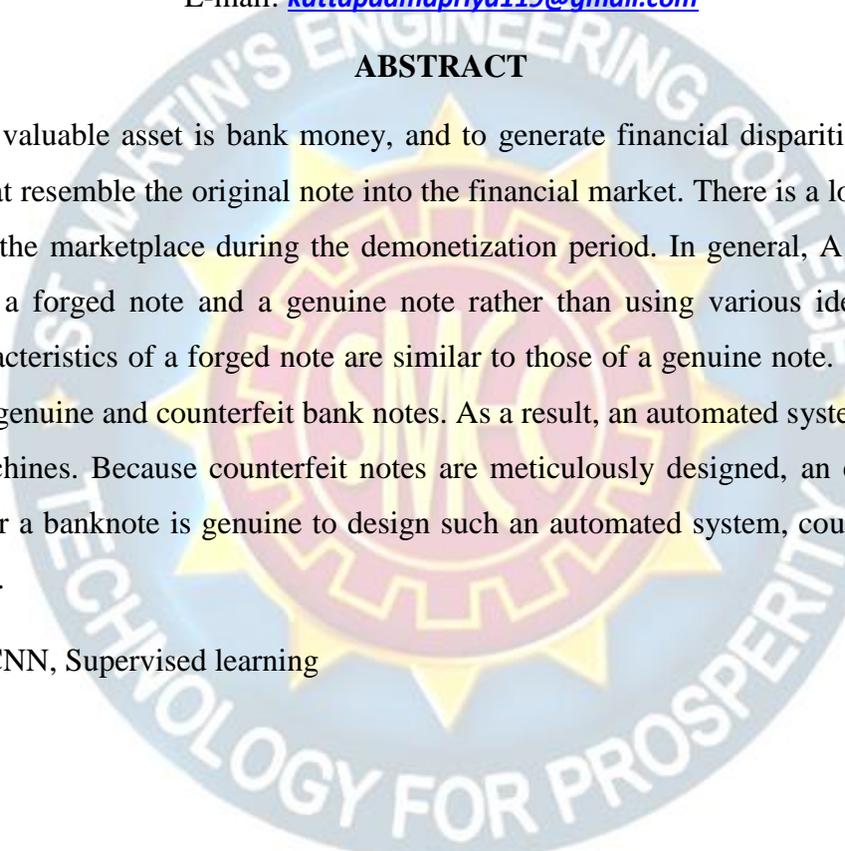
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ABSTRACT

Our country's most valuable asset is bank money, and to generate financial disparities, criminals introduce counterfeit notes that resemble the original note into the financial market. There is a lot of counterfeit money floating around in the marketplace during the demonetization period. In general, A human cannot tell the difference between a forged note and a genuine note rather than using various identification parameters because Many characteristics of a forged note are similar to those of a genuine note. It is difficult to tell the difference between genuine and counterfeit bank notes. As a result, an automated system must be available in banks or ATM machines. Because counterfeit notes are meticulously designed, an effective algorithm for determining whether a banknote is genuine to design such an automated system, counterfeit or forged bank currency is required.

Keywords—: ML, CNN, Supervised learning



UGC AUTONOMOUS

Predicting Plant Growth and Yield in Greenhouse Environments using Deep Learning

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ABSTRACT

Plant development and production forecasting are crucial tasks for greenhouse farmers and farmers in general. Creating designs that closely replicate growth and yield may assist growers in improving environmental management for higher output, healthy grant and market demand, and cheaper costs. Deep Learning (DL) and Machine Learning (ML) are developing as powerful new analytical tools. In controlled greenhouse circumstances, the proposed research combines machine learning and deep learning approaches to estimate production and plant development in two separate situations: tomato yield forecasting and Ficusbenjamina stem growth. In the prediction formulae, we use the LSTM neuron model to construct a new deep RNN. The RNN structure is utilised to change the intended increase parameters based on prior yield, growth, and stem diameter data, as well as microclimate circumstances. A comparative investigation is presented to evaluate the overall performance of the various solutions, which includes machine learning methods such as assist vector regression and random woody area regression, as well as the propose rectangle error criterion.

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Deep Learning Based Medicinal Leaf Identification Using Mobile Net

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ABSTRACT

The demand for automatic detection of medicinal plants is driven by their therapeutic properties and potential to treat a wide range of illnesses. The root, fruit, bark, and stem are among the several plant parts that can be used to identify them, but because leaf photos are such a rich source of data and are so accessible, they are frequently employed. This research examined the "deep learning" area of artificial intelligence and suggests an ensemble learning method for quickly identifying medicinal plants from a leaf image. There are 30 classes in the dataset for medicinal leaves. The settings were set up and the MobileNetV2 neural networks was pretrained using a transfer learning method. Using these component models, features from the input photographs were extracted, and the classifier for training the models on the relevant dataset was the soft max layer connected to the dense layer. Utilizing three-fold and five-fold cross- validation, the accuracy results were verified. Based on the weighted average of the component model outputs, Ensemble Deep Learning- Automated Medicinal Leaf Identification was chosen as the final classifier (EDL-AMLI). By obtaining good average accuracy as well as accuracy on the test set utilizing threefold and fivefold cross- validation, The EDL- AMLI was proven to perform better than the most advanced pre-trained model, including MobileNetV2.

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Data Leakage Detection System

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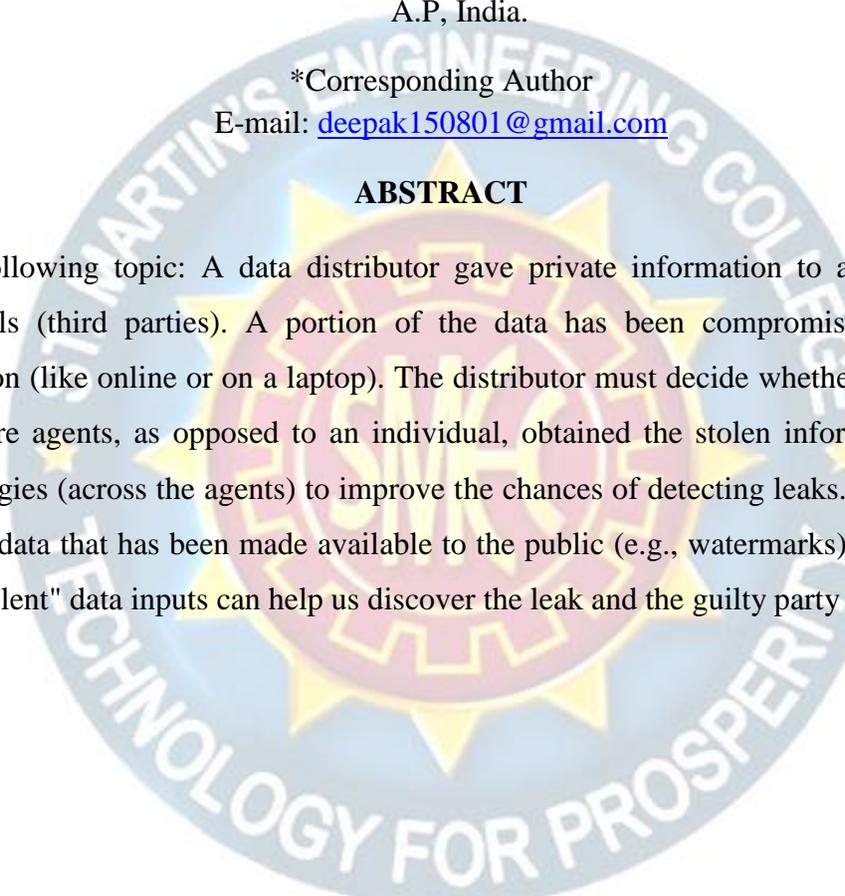
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ABSTRACT

We research the following topic: A data distributor gave private information to a group of supposedly reputable individuals (third parties). A portion of the data has been compromised and is now in an unauthorized location (like online or on a laptop). The distributor must decide whether it is more likely than not that one or more agents, as opposed to an individual, obtained the stolen information. We offer data dissemination strategies (across the agents) to improve the chances of detecting leaks. These methods do not rely on altering the data that has been made available to the public (e.g., watermarks). In some cases, adding "realistic and fraudulent" data inputs can help us discover the leak and the guilty party more quickly.



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Machine Learning-Based Classification of Hyper spectral Data

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ABSTRACT

Classification is one of the most popular topics in hyper spectral remote sensing. In the last two decades a huge number of methods were proposed to deal with the hyper spectral data classification problem. However, most of them do not hierarchically extract deep features. In this paper, the concept of deep learning is introduced into hyper spectral data classification for the first time. First, we verify the legibility of stacked auto encoders by following classical spectral information-based classification. Second, a new way of classifying with spatial-dominated information is proposed. We then propose a novel deep learning framework to merge the two features, from which we can get the highest classification accuracy. The framework is a hybrid of principle component analysis (PCA), deep learning architecture, and logistic regression. Specifically, as a deep learning architecture, stacked auto encoders are aimed to get useful high-level features. Experimental results with widely-used hyper spectral data indicate that classifiers built in this deep learning-based framework provide competitive performance. In addition, the proposed joint spectral spatial deep neural network opens a new window for future research, showcasing the deep learning-based methods’ huge potential for accurate hyperspectral data classification.

Keywords: Auto encoder (AE), deep learning, feature extraction, hyper spectral data classification, logistic regression, stacked auto encoder (SAE), support vector machine (SVM).

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Data science for business: benefits, challenges and opportunities

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ABSTRACT

This paper aims to identify the benefits of data science (DS) for organizations, highlighting the challenges and opportunities related to developing this capability. Design/methodology / approach Initially, literature review was performed. Later, empirical data were collected through a structured electronic interview answered by 211 informants, who are most Experience dmanagers of medium and large organizations from different economic sectors, and data were submitted to content analysis. Findings–The most frequently observed benefits are as follows: support for data analysis and insight generation with agility; creation of a data-driven culture; improvement of data quality; facilitating the Understanding of the business environment, opportunity sensing; and organizational performance management.

Keywords: Dynamic capabilities, Big data analytics, Competitive advantage, Data science, Analytical capabilities, Business intelligence and analytics

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Fire Alarm System Based On Nodemcu-A Detailed Review

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ABSTRACT

Fire alarm systems are very common nowadays and commonly installed in Banks, shops, offices, home etc. They detect the fire and trigger a loud alarm to aware everybody. But what if nobody is there to hear that alarm, like in night time or when nobody is at home. So to inform the authority about any fire incident today we are building a IoT based Fire Alarm system which not only trigger an alarm but also sends a Email alert to concern persons. This method can also be used to inform fire department automatically in case of fire. Here we will use Infrared Flame Sensor to detect the fire and ESP8266 NodeMCU to trigger the alarm and send email with the help of SMTP server. This project can be further extended to make a phone call or send an SMS with the help of GSM module in case of fire.

Key words : Node MCU, Fire Alarm, IoT

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Optimizing Resource Allocation and Work Offloading in Edge-Cloud Networks

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ABSTRACT

A new kind of computing called edge-cloud offloads work from mobile devices to edge or cloud servers. The choice to offload the work is based on a number of variables, including time-varying radio channels, the availability of processing resources, and the location of the devices. Nevertheless, task offloading may result in higher energy consumption and delays. Making the best offloading options in the dynamic and resource-restricted context of edge-cloud computing is difficult. In order to reduce latency and satisfy compute and communication demands in edge-cloud computing, this article tries to optimise offloading and resource allocation. We use deep reinforcement learning to determine the best solution for the multi-objective issue of optimising task offloading in the edgecloud computing environment. The issue is formulated as a Markov decision process, and a DDMTO (Distributed Deep Meta learning-driven Task Offloading) method is used to achieve this. Our DMRO (Deep Meta Reinforcement Learning) scheme analyses resource consumption, job restrictions, and the current condition of the edge-cloud network to make offloading choices dynamically. According to the simulation findings, DDQNEC performs better than heuristic methods in terms of resource usage, task offloading, and task rejection.

Keywords: Arduino, gsm module, LED

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