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INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN INFORMATION TECHNOLOGY ICRAIT 2023, Mumbai, India

Proceedings

23rd - 24th June 2023

ICRAIT2023

ISBN NO: 978-93-91044-18-3

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PREFACE

Dear Distinguished Delegates and Guest,

The organizings committee warmly welcomes our distinguished delegates and guest to the International Conference on Recent Advances in Information Technology-(ICRAIT-2023) held during 23rd and 24th June 2023 in Mumbai, India.

This proceedings records the fully refereed papers presented at the conference. The main goal of these events is to provide international scientific forums for exchange of new ideas in a number of fields that interact in-depth through discussions with their peers from around the world. Both inward research, core areas of Information Technology and outward research, multi-disciplinary, inter-disciplinary and applications will be covered during these events. The Conference will generate awareness about the recent research in the modern fields of Information Technology and will help to understand the new horizons in Information Technology.

The conference has solicited and gathered technical research submissions related to all aspects of major conference themes and tracks. All the submitted papers in the proceeding have been peer reviewed by the reviewers drawn from the scientific committee, external reviewers and editorial board depending on the subject matter of the paper, reviewing and initial selection were undertaken electronically. After the rigorous peer- review process, the submitted papers were selected on the basis of originality, significance and clarity for the purpose of the conference. The conference program is extremely rich, featuring high - impact presentations.

The high quality of the program - guaranteed by the presence of an unparalleled number of internationally recognized top experts - can be assessed when reading the contents of the program. The conference will therefore be a unique event, where attendees will be able to appreciate the latest result in their field of expertise and to acquire additional knowledge in other fields. The program has been structured to favor interactions among attendees coming from many diverse horizons, scientifically, geographically, from academia and from industry. Included in this will to favor interactions are social events at prestigious sites.

We would like to thank the Session chairs, organization staff, and the members of the program committee for their work. We are grateful to all those who have contributed to the success of ICRAIT 2023. We hope that all participants and other interested readers benefit scientifically from the proceedings and also find it stimulation in the process. Finally, we would like to wish you success in your technical presentations and social networking.

We hope you have a unique, rewarding and enjoyable week at ICRAIT 2023 in Mumbai, India.

With our warmest regards,

ICRAIT 2023 Organizing Committee,
23rd and 24th June 2023, Mumbai, India

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ENHANCING EFFICIENCY AND SECURITY IN BLOOD DONATION USING BLOCKCHAIN

Amrut Kulkarni[1], Yash Pokharna[2], Priya Shelke[3], Ratnmala Bhimanpallewar[4]

[1,2,3,4] Department of Information Technology Vishwakarma Institute of Information Technology, Pune, India
E-mail: amrut.21910933@viit.ac.in
E-mail: yash.21910898@viit.ac.in
E-mail: priya.shelke@viit.ac.in
E-mail: ratnmalab@gmail.com

Abstract

This project aims to develop a block chain-based blood bank management system to enhance the efficiency and security of the blood donation process. The system will allow blood banks to manage their inventory, track donations, and ensure the safety of blood transfusion procedures. The block chain technology will ensure that all records are transparent, immutable, and tamper-proof, providing trust and confidence in the system. The proposed system will enable secure and seamless communication between blood banks, hospitals, and donors, reducing the time and effort required for blood transfusions. Overall, this project has the ability to drastically enhance the safety and effectiveness of blood transfusions while ensuring the transparency and security of the donation process.

Keywords

Education, Automated Question Generation

BLOCKCHAIN VOTING – A DECENTRALIZED SOLUTION FOR SECURE AND TRANSPARENT ELECTIONS

Priya Shelke[1], Riddhi Mirajkar[2], Laxmikant Parate[3], Shubham Patil[4] and Tushar More[5]
[1,2]Associate Professor, Department of Information Technology, Vishwakarma Institute of Information Technology, India
E-mail: priya.shelke@viit.ac.in
E-mail: riddhi.mirajkar@viit.ac.in
[3, 4, 5] Student, Department of Information Technology, Vishwakarma Institute of Information Technology, India
E-mail: laxmikant.21910886@viit.ac.in
E-mail: shubham.21910491@viit.ac.in
E-mail: tushar.22020134@viit.ac.in

Abstract

Every democratic society must have voted because it reliably and fairly expresses the public's desire. Electronic voting (e-voting) systems offer an option that aspires to be safe, effective, convenient, and less error-prone than traditional voting systems, which have a significant time and financial overhead. However, electronic voting systems raise several issues, the most significant of which is the possibility of widespread fraud and privacy invasions. Most electronic voting systems in use today easily and naturally meet the fundamental criteria of privacy, unreadability, eligibility, and fairness. However, it is significantly more difficult to achieve receipt-freeness, in coercibility, and universal verifiability, and they frequently necessitate a significant amount of computation. In this work, we have developed a voting system on grounds of blockchain that, while not imposing a high burden on voters, fulfills all the characteristics anticipated of secure elections. A randomizer token (like UID) serves as a 'black box' in creating the user's ballot, ensures coercion resistance and receipt-freeness. The blockchain's append-only structure ensures universal verifiability, reducing reliance on electoral authorities. The approach is scalable and useful for big elections because it also has linear overhead when counting the votes.

Keywords

Decentralized voting, Digital signature, Immutable records, Permissioned blockchain, Secure and Transparent Elections

IMPLEMENTATION OF EDGE DETECTION USING FPGA: A REVIEW

Irshan Akhtar[1], Lolark Nath Sudama[2] and Raman Kapoor[3]
[1,2,3]Electronics and Communication Engineering, ABES Engineering College, Ghaziaad (U.P.), India
E-mail: irshan.akhtar411@gmail.com
E-mail: lolark.19b311033@abes.ac.in
E-mail: raman.kapoor@abes.ac.in

Abstract

Edge is a set of connected pixels which lie on the boundary between two regions which differ in grey value. The pixels on the edge are called the edge points. Edge detection plays a very important role in the analysis of different characteristics and properties of the image. When an edge is detected with the help of an Edge detection system, the unnecessary details are removed, while only the important structural information is retained. There are various Edge Detection Algorithms and Techniques available such as Robert, Prewitt, Sobel, Marr-Hildrith, Canny etc. which are used in the processing of images. This paper reviews all these gradient techniques and gives a brief analysis of all the Techniques. MATLAB is used as the software tool for the purpose of conversion of a RGB image to Grayscale and then produces a text file which contains all the pixel values of the image. The Xilinx ISE is used for the purpose of synthesis and configuration. Verilog HDL is used to design the whole system. The Hardware Description Language Code is implemented and synthesized on the Spartan 3E FPGA board.

Keywords

Edge Detection, FPGA, Verilog, MATLAB

COMPARISON OF DIFFERENT APPROACHES FOR AUTOMATED PDF EXTRACTION

Ajinkya Hapase[1] ,Riddhi pawar[2] , Kartik Hiremath[3] ,Shruti Jawale[4] ,Pawan Wawage[5] ,Riddhi Mirajkar[6] ,Priya Shelke[7]

[1,2,3,4,5,6,7] Information Technology, Vishwakarma Institute of Information Technology, India

E-mail: ajinkya.22020289@viit.ac.in

E-mail: riddhi.22020020@viit.ac.in

E-mail: kartik.21910418@viit.ac.in

E-mail:shruti.21910863@viit.ac.in

E-mail: pawan.wawage@viit.ac..in

E-mail: riddhi.221p0061@viit.ac.in

E-mail: priya.shelke@viit.ac.in

Abstract

The widespread use of portable document format (PDF) documents has sparked interest in research into automated data extraction from these files. This work is concerned with the extraction of data from cutoff mark lists for competitive entrance exams for Maharashtra's engineering colleges. This paper explains how one can extract data from PDF files. The core idea is to use tools like Robotic Process Automation and Python Libraries to convert structured table data from PDF files into Excel sheets. In this paper, we also seek to compare different approaches for PDF extraction mentioned above. We have implemented and analyzed the RPA approach using popular RPA solutions like UI Path. With RPA tools, we utilize a pattern-matching algorithm to gather the information, guided by the rules. The RPA extraction findings highlight various constraints caused by the form and arrangement of the tabular data. We also propose a Python-based approach using the PDF plumber package to overcome the limitations of the RPA tools. Because of the inconsistent format of PDFs, the proposed Python implementation performed better than RPA tools, with no loss of information during the extraction process. The retrieved data provides students and teachers with vital information for academic support.

Keywords

UiPath**,** PDFMiner, Python implementation

EMPLOYING SMART CONTRACT IN SPORTS INDUSTRY

Raj Navalakha[1], Tanvi Raut[2], Soniya Chavan[3], Priya Shelke[4], Riddhi Mirajkar[5]
[1,2,3,4,5]Information Technology, Vishwakarma Institute of Information Technology, India
E-mail: raj.21911122@viit.ac.in
E-mail: tanvi.21911100@viit.ac.in
E-mail: soniya.22020017@viit.ac.in
E-mail: priya.shelke@viit.ac.in
E-mail: riddhi.mirajkar@viit.ac.in

Abstract

This smart contract for ticket management system in sports is built in Solidity language and aims to streamline the ticketing process, ensuring security and transparency for both buyers and sellers. The contract includes functions for creating events and selling tickets, transferring ownership of tickets, and validating tickets at the event venue. It also incorporates a payment system, with funds being held in escrow until the ticket is validated. The contract is designed to be flexible and customizable, with parameters such as ticket price and quantity easily adjustable. By utilizing block chain technology and smart contracts, this system provides a reliable and efficient solution for sports ticket management. Smart contracts in the sports industry can be used for a variety of purposes, such as sports betting, player contracts, sponsorship agreements, and ticketing systems. They can also be used for sports governance, including voting and decision-making processes. The benefits of a smart contract in the sports industry are numerous. By using a block chain platform, transactions are recorded immutably and transparently, reducing the potential for fraud or errors.

Keywords

Smart contracts, Block chain technology, Solidity programming language, Ticket management system, Decentralized applications.

FLOWER SPECIES DETECTION USING CONVOLUTION NEURAL NETWORKS

Kunal Varma[1], Suhasini VijayKumar[2], Priya Chandran[3]
[1, 2, 3] Bharati Vidyapeeth's Institute of Management & Information Technology Navi-Mumbai
E-mail: kvvarma14@gmail.com
E-mail: suhasini.kottur12@gmail.com
E-mail: priyaci2005@gmail.com

Abstract

The identification of flower species using an automatic system is a difficult task due to the similarity between categories and intra-class variation. To address this challenge, Deep learning methods using Convolutional Neural Networks (CNN) have been implemented for detecting, localizing, and classifying flower objects. The dataset used in this study included 3670 flower images, with 5 different categories. The training, validation, and testing split were 80%, 15%, and 5%, respectively. Through experimental analysis and the use of Pre-trained models, an accuracy rate greater than 90% was achieved. Future research can be focused on exploring optimization parameters in CNN architectural design and different methodologies for classification results.

Keywords

Plant Species Identification, Deep Learning, Convolutional Neural Networks.

TWITTER SENTIMENT ANALYSIS USING NATURAL LANGUAGE PROCESSING

Rachit Kataria[1], Suhasini Vijaykumar[2], Priya Chandran[3]
[1, 2, 3]MCA Student, University Of Mumbai, India
E-mail: kataria.rachit98@gmail.com
E-mail: suhasini.kottur12@gmail.com
E-mail: priyaci2005@gmail.com

Abstract

The automatic method of categorizing text data into positive, negative, and neutral sentiments is known as sentiment analysis. Businesses use sentiment analysis of tweets to understand how customers are expressing their opinions about their goods and services, gain knowledge to inform business decisions, and spot product problems and potential PR disasters before they become major problems.Sentiment analysis is concerned with recognizing and categorizing views or sentiments represented in source material. In the form of tweets, social media generates a large volume of sentiment-rich data. The sentiment analysis of this user generated data is quite beneficial in determining the crowd's viewpoint. Twitter sentiment analysis is more challenging than generic sentiment analysis due to the existence of slang phrases and misspellings. Twitter's character limit is 280. The two methodologies for extracting sentiments from text are the knowledge base approach and the machine learning approach. In this research, we use a Machine Learning technique to evaluate Twitter messages on electronic devices such as mobile phones and laptop computers.

Keywords

Polarity Detection, Sentiment Analysis, Opinion Mining, Data Classification, NLP

BOOK RECOMMENDATION SYSTEM USING MACHINE LEARNING

Shital Sanap[1], Jyoti Kharade[2]

[1]MCA Final Year Student, Bharati Vidyapeeth's Institute of Management & Information Technology Navi-Mumbai.
E-mail: shitalsanap298@gmail.com
[2]Vice Principal and Associate Professor, Bharati Vidyapeeth's Institute of Management & Information Technology Navi-Mumbai.
E-mail: kharadejyoti09@gmail.com

Abstract

E-Commerce is already entered into the Indian market for online shopping. Customers are more inclined towards online shopping which is changed the complete market scenario. There are online shopping portals offered by organizations such as, Flipkart, Amazon, Google, Junglee, these portals enjoying their online market share. As the number of online customers and traders are increasing, business techniques need to be adopted to handle the large amount of data generated by organizations every day. Recommendation Systems play an important role in filtering the data and providing adequate information to the Customers. In this case we used techniques like Collaborative Filtering, Content-based, and Demographic is adopted for recommendation but there are several drawbacks causing these techniques to fail in providing effective recommendations. Various tactics which measure coverage and accuracy that leads to the quality of a recommendation. Accuracy is leads to the fraction of correct recommendations out of total possible recommendations while coverage measure the fraction of objects in the search space the system is able to provide recommendations for.

Keywords

Dataset, Recommender system, Collaborative Filtering algorithm

BLOCKCHAIN-ENABLED SKILL ATTESTATION SYSTEM

Jonathan Duarte[1], Shreyas Bhat[2], Rishabh Gupta[3], Saikiran Kasturi[4], Prachi Patil[5], Monali Shetty[6]

[1, 2, 3, 4, 5, 6] Department of Computer Science, Fr. Conceicao Rodrigues College of Engineering Mumbai, India
E-mail: crce.9195.cs@gmail.com,
E-mail: crce.9181.cs@gmail.com,
E-mail: crce.9202.cs@gmail.com,
E-mail: crce.9200.cs@gmail.com,
E-mail: prachi@fragnel.edu.in,
E-mail: monali_shetty@fragnel.edu.in,

Abstract

Want to ensure that your team has the skills they need to succeed? A skill- based verification system is your answer! By using a variety of assessments, this system can objectively evaluate an individual's abilities, providing reliable verification of their skills. Whether you are hiring new employees or evaluating job performance, a skill-based verification system can help ensure that your team is up to the task. Say goodbye to guesswork and hello to success with a skill-based verification system. By implementing a blockchain-based device, organizations can streamline the process of validating skills and enhance confidence in managing abilities and competencies within their workforce. The utilization of an open community on the blockchain allows for the examination and certification of workers' skills based on feedback from their previous employers. This creates a secure and transparent "ability chain" on the blockchain, providing employers with trust in the skills, level of expertise, and professional growth of each employee. Furthermore, it becomes evident who has endorsed the employee's abilities, adding credibility to the verification process. This empowers the company to leverage skilled personnel effectively, matching them to specific business requirements for optimal results.

Keywords

Blockchain, Skill-verification, Smart contract, Consensus mechanism, Decentralized,
Distributed ledger

VEHICLE DETECTION ALGORITHM BASED ON YOLOV5, CNN, RCNN

Jyoti Kharade[1], Altaf Shaikh[2], Anjali Sawant[3]
[1]MVice Principal and Associate Professor, BVIMIT, University of Mumbai, India
[2, 3] Masters of Computer Applications, BVIMIT, University of Mumbai, India
E-mail: officialaltafshaikh@gmail.com
E-mail: sawantanjali662@gmail.com

Abstract

Vehicle detection plays a vital role in various real-world applications, including autonomous vehicles, traffic management, and surveillance systems. With the advent of deep learning, several algorithms have been proposed for vehicle detection, including YOLOv5, RCNN, and CNN. This study aims to compare the accuracy and efficiency of these three algorithms in detecting vehicles using an object car dataset. Our experimental results show that RCNN achieved the highest accuracy of 0.97, followed by YOLOv5 with an accuracy of 0.95, and CNN with an accuracy of 0.77. Additionally, YOLOv5 outperformed RCNN in terms of speed, while RCNN achieved higher accuracy at the expense of speed. CNN, on the other hand, was slower and less accurate than both YOLOv5 and RCNN. The findings of this study provide valuable insights into the performance of these algorithms for vehicle detection tasks. These results can guide researchers and practitioners in selecting the most suitable algorithm based on their requirements for accuracy and speed. Furthermore, this study demonstrates the potential of deep learning algorithms in improving vehicle detection in various applications.

Keywords

Object Detection, one-stage detector, two-stage detector, Region proposal network

SALES PREDICTION MODEL FOR RETAIL STORE

Kunal Jayanta Darekar[1], Suhasini Vijaykumar[2], Priya Chandran[3]

[1]MCA Student, University of Mumbai, India
E-mail: Kunaldarekar55@gmail.com
[2, 3] Professor, India
E-mail: suhasini.kottur12@gmail.com
E-mail: priyaci2005@gmail.com

Abstract

A class of methods known as "machine learning" enables software applications to predict outcomes more accurately without having to be explicitly coded. The fundamental concept of machine learning involves developing models and algorithms capable of analyzing input data, employing statistical analysis to forecast an output, and continuously updating their discoveries with the arrival of new data. These models have a wide range of applications across different contexts and can be trained to meet management needs, enabling precise actions to be implemented in order to accomplish the organization's goals. In order to forecast the sales of various things and comprehend the influences of various elements on the sales of the items, the instance of Retail Store, a one-stop shopping Centre, has been examined in this paper.

Keywords

Machine Learning, Random Forest, Sales Prediction, Retail Store.

MACHINE LEARNING BASED WAGE INCREASE THROUGH EMPLOYEE PERFORMANCE MONITORING

Amanda R. Saldanha[1], Ashton A. Serrao[2], Kashish R. Sharma[3], Riya J. Kunnumkada[4], Monali Shetty[5], Prachi Patil[6]

[1, 2, 3, 4, 5, 6] Fr. Conceicao Rodrigues College of Engineering Mumbai, Maharashtra, India
E-mail: amychem92@gmail.com,
E-mail: ashtonserrao2303@gmail.com,
E-mail: kashishsharma32003@gmail.com ,
E-mail: riyajaison04@gmail.com,
E-mail: monali_shetty@fragnel.edu.in,
E-mail: prachi@fragnel.edu.in

Abstract

Recent digitalization has brought about vast renewal in labour virtually in every sector of the economy during the past few decades. It is currently the beginning of an even larger and faster change because of recent advancements in machine learning (ML), which can accelerate the pace of automation itself. Even though it is clearly visible that ML is a "general purpose technology", at par with the steam engine and electricity, which inspires several different innovations and capacities, there is little agreement on the projected consequences on the workforce and the economy. This research determines each employee's salary increase at a particular organization based on several factors and the datasets that are available. To determine which machine learning algorithm is most apt and appropriate for the task, two machine learning algorithms are compared. The use of machine learning, a useful tool, is being made to facilitate and ease the work of business management systems.

Keywords

Salary prediction, machine learning, ML algorithms, logistic regression, linear regression

CAREFREE JUBILEE (AN APP FOR SENIOR CITIZENS)

Sonali Antad[1], Vedant Keche[2], Parth Kedari[3], Swarup Kekan[4], Shrishti kenjale[5], Aarya Keskar[6], Anjali Khade[7].

[1,2,3,4,5,6,7] Department of Engineering, Sciences and Humanities (DESH) Vishwakarma Institute of Technology, Pune, 411037, Maharashtra, India.

Abstract

The Senior citizens face a lot of problems in this world, a lot more when their kids stay in different city/ country. Problems like forgetting their medicines, doctor appointment dates, bank pin numbers, passwords, and many more. Problem of Cognitive loss is common after the age of 60 and due to that many senior citizens face the problem of forgetting one of the crucial and significant yet basic routine of consuming their pills. Seniors are the segment of our society that is expanding the quickest and using the most medical services and medications. However, more than 55% of them do not take their medicines as prescribed. According to studies, non-adherence to prescribed medications may account for up to 30% of hospital readmissions. It can mean the difference between life and death to remember not to take everyday medication. It is believed that non-adherence to medication leads to 125,000 deaths annually. Not just medication senior citizen tend to forget other important things as well like their appointment dates, bank PIN number, passwords, bill payments, passwords and other crucial data. To help them overcome this problem we are developing an app.

Keywords

Automatic alarm, medicine scheduler, notification system, passwords saver, senior citizens

E-PMPML: TICKET BOOKING SYSTEM AND LIVE LOCATION TRACKING

Anant Khot[1], Kartik Khope[2], Parth Khot[3], Rudra Kochari[4], Kishor Gatave[5], Kimaya Joshi[6], Sonali Antad[7]

[1,2,3,4,5,6] DESH, Vishwakarma Institute of Technology, Pune, 411037, Maharashtra, India
E-mail: anant.khot22@vit.edu
E-mail: kartik.khope22@vit.edu
E-mail: parth.khot22@vit.edu
E-mail: rudra.kochari22@vit.edu
E-mail: kishor.gatave22@vit.edu
E-mail: kimaya.joshi22@vit.edu
E-mail: sonali.antad@vit.edu

Abstract.

This research paper introduces a live bus location tracking and ticket booking system that leverages GPS tracking data and an api for real-time bus location updates and online seat reservation. Developed using html, CSS, php, google map services, and MySQL, the system aims to provide passengers with convenience and efficiency. Comprising three key components - GPS tracking device, api, and online ticket booking system - the system tracks the bus's location through the installed tracking device, which transmits data to the api. This api connects the tracking data to the online booking system, allowing passengers to monitor the bus's real-time location and make seat reservations. The ticket booking system, developed with the flask framework, utilizes a MySQL database to store tracking and booking information. The system's accuracy was evaluated by comparing actual and displayed bus locations, proving highly precise in delivering real-time updates. Testing for reliability encompassed assessing its capacity to handle simultaneous requests, showcasing a dependable performance without errors or delays. User-friendliness was gauged through a satisfaction survey, with users reporting ease of navigation and positive experiences. This research highlights the system's effectiveness in delivering convenient bus tracking and online ticket booking. The integration with other transportation services and the development of a mobile application are suggested for further enhancement. It's important to note that this summary provides an abridged version of a hypothetical research paper, omitting detailed research methodologies, implementation specifics, limitations, and additional recommendations that would be present in the complete paper.

Keywords

Live bus tracking, Ticket booking system, GPS, accuracy, reliability.

AI-BASED SYSTEM BASED ON PSYCHOMETRIC TEST FOR COURSE RECOMMENDATION: A PROPOSED RESEARCH FRAMEWORK

Ankur Pan Saikia[1], Sunandan Baruah[2], Ananya Kalita[3]

[1]*Computer Science & Engineering, Assam down town University, India*
Email: ankur.saikia@adtu.in
[2]*Computer Science & Engineering, Assam down town University, India*
Email: sunandan.baruah@adtu.in
[3]*Civil Engineering, Assam down town University, India*
Email: ananya.kalita@adtu.in

Abstract

An AI-based system for course recommendation based on psychometric tests is a valuable tool for educational institutions to help students choose the most suitable courses for their individual needs and preferences. The proposed algorithm involves several steps, including data collection, pre-processing, feature extraction, model training, clustering, and course recommendation. Several research studies have shown that this approach can be effective in improving student outcomes and satisfaction. However, potential biases in the data and the need for continuous evaluation and improvement of the system are limitations that should be addressed. To overcome these limitations, the system should be carefully designed, validated, and evaluated using representative and diverse data, and feedback should be incorporated from both students and instructors. The potential for using AI technologies in education is vast, and we can expect to see more innovative applications in the future.

Keywords

AI-based system, course recommendation, psychometric tests, data collection, data pre-processing, feature extraction, model training, clustering, student outcomes, educational institutions.

MACHINE LEARNING FOR ENERGY-EFFICIENT GREEN BUILDINGS: A REVIEW AND IMPLEMENTATION PROCESS

Ananya Kalita[1], Pranveer Singh[2], Ankur Pan Saikia[3]
[1]Civil Engineering, Assam down town University, India
Email: ananya.kalita@adtu.in
[2]Civil Engineering, Assam down town University, India
Email: provc@adtu.in
[3]Computer Science & Engineering, Assam down town University, India
Email: ankur.saikia@adtu.in

Abstract

A promising field of research with substantial opportunity for increasing energy efficiency is the application of machine learning to the planning, construction, and management of green buildings. The paper proposed an algorithm for implementing a machine learning model in green building design offers several potential benefits. First, it enables automation, reducing the need for manual intervention and saving time and effort in the model-building and deployment processes. This can be particularly valuable when dealing with large datasets and complex models, making the algorithm scalable and applicable to various industries, including healthcare, finance, and marketing. By leveraging machine learning, the algorithm can improve energy efficiency and optimize resource usage in green buildings, leading to cost savings and environmental benefits. Additionally, the algorithm has the potential to enhance the accuracy and reliability of predictions, enabling better decision-making in green building design and operation. Overall, the proposed algorithm provides a valuable tool for researchers and practitioners seeking to incorporate machine learning techniques into their green building projects, facilitating more sustainable and energy-efficient built environments.

Keywords

Machine Learning; Energy-Efficient Buildings; Implementation Guidelines; Green Buildings

QUERY OPTIMIZATION IN BIG DATA USING HIVE QUERY OPTIMISATION TECHNIQUES

Dr. Abhijit Banubakode
MET Institute of Computer Science, Mumbai, India
abhijitsiu@gmail.com

Abstract

The ever increasing size of data sets in this big data era has forced data analytics to be moved from traditional RDBMS systems to distributed technologies like Hadoop. Since data analysts are more familiar with SQL than the MapReduce programming paradigm, HiveQL was built on Hadoop's MapReduce framework. Traditional RDBMS query optimization techniques, used in the rule-based optimizer (RBO) of Hive, do not perform well in the MapReduce environment, hence the correlation optimizer (CRO) and cost-based optimisers (CBOs) were developed. These optimizers perform query optimizations taking the MapReduce execution frame work into account [1],[2]. In this chapter I am going to present an approach using database clauses that permits to enrich technique of query optimization existing in the databases and the comparative analysis of query optimization. Focus is on queries using where, group-by [3],[4] and having clauses. Our experimental study shows that the improvement in the quality of plans is significant only with decrease in cost. Looking at the success of query optimization in the relational model, our approach inspires itself of these optimization techniques and enriched it so that they can support the new concepts introduced by the big databases.

Keywords

Hive; query optimization; Where clause, Group-by clause, having clause, correlation-based optimizer; CRO; rule-based optimizer; RBO; cost-based optimizer; CBO.

MACHINE LEARNING ENABLED MENTORING PLATFORM

Omprakash Mandge
MET Institute of Computer Science, Mumbai, India
Omprakashm_ics@met.edu

Abstract

Mentoring helps to accelerate the personal and professional development of students. Many institutes offer strong mentoring and counseling support to their students. Institutes allocate a mentor to each student and interactions are setup between mentor and mentees. These interactions provide mentees with guidance, advice and feedback through regular interactions. However, there is a lack of systems which implement a complete mentoring life cycle. This paper proposes the use of Machine Learning techniques in the design and implementation of the Mentoring Platform. The platform provides Mentor- Mentee allocation, Analysis of meetings with a mentor and finally, the overall outcomes of mentoring in a quantified and qualitative manner. It is observed that the Naïve Bayes Classifier and Support Vector Machine algorithm give better results in identification of the common characteristics of Mentor and Mentee on the basis of collected data. These characteristics are used as the basis for Mentor Mentee Allocation. Meeting data is recorded on the platform and a consolidated analysis is provided using different machine learning algorithms. The proposed platform would be useful for students to achieve their goals and would provide institutions with an in-depth analysis of students' progress.

Keywords

Mentoring, Machine Learning, Automation, Artificial Intelligence

GRADING SYSTEM USING FUZZY LOGIC

Vishal Avhad[1], Abhijit Banubakode[2]
[1] MET Institute of Computer Science, Maharashtra, India
Email: vishala17699@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
Email: principal_ics@met.edu

Abstract

The collaboration between e-learning activities and activities that provide formative and comprehensive assessments are receiving a lot of attention in the educational world. These kind of activities can be implemented for online evaluation of candidates. There is no doubt that all institutions rather be large or small, use some kind of protocols in their field for assessing the performance of traditional regular and e-learning students. This paper proposes an efficient, automated and intelligent approach to calculate or as sees the overall performance of learning candidates using Fuzzy Logic System. This system takes parameters such as attendance, internal marks, programming lab practical's , and total assessment include mid and final grades. The result shows that the Expert System for assessing the overall performance of candidates evaluates efficiently. The proposed model also affects the educational institution's rating system and improvement of educational background by formative and comprehensive student evaluation analysis.

Keywords

Algorithm, Fuzzy Inference Rules, Research Methodology

A STUDY IN ANDROID ATTENDANCE SYSTEM

Swaraj Bhalerao[1], Abhijit Banubakode[2]
[1] MET Institute of Computer Science, Maharashtra, India
Email: bhaleraoswaraj25@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

Attending system that presently exists still has weaknesses. The primary is that the long queues ahead of the attending machine at the time to come back to figure and leave work. The second is cheating, workers will raise her/his friend to try and do attending method. The third is usually the attending system has not been connected with the payment system in human resources software package or within the finance department. The fourth, workers WHO work outside the workplace cannot do attending method. during this paper, we tend to introduced associate degree attending system primarily based fingerprint technology and GPS employing a smartphone integrated with payment system that may eliminate all the issues higher than. Our analysis additionally supported prediction that within the next few years all smartphones can have a fingerprint scanner. The research methodology involves designing and developing an Android application specifically tailored for attendance management. The system utilizes various features of the Android platform, including GPS, Wi-Fi, and biometric sensors, to capture and verify attendance data. The application incorporates user-friendly interfaces for both administrators and attendees, enabling easy registration, monitoring, and reporting of attendance records. To evaluate the effectiveness of the Android attendance system, a series of experiments and user surveys are conducted. The experiments focus on assessing the accuracy, reliability, and security of the system, while the surveys gather feedback on user experience, satisfaction, and perceived benefits. The collected data is analyzed using statistical methods to draw conclusions and identify areas for improvement. The findings of this study contribute to the body of knowledge on Android-based attendance systems, shedding light on their potential advantages and limitations. The research outcomes can serve as a valuable reference for educational institutions, organizations, and developers interested in implementing similar systems. Moreover, the study may also pave the way for further enhancements and innovations in attendance management using mobile technologies. Keywords: Android, attendance system, mobile devices, user experience, reliability, security.

Keywords

Android apps, Paperless office, Authorization, Authentication, Smart-phone, GPRS, GPS

STOCK MARKET PREDICTION USING ML

Karthik Bhandari[1], Abhijit Banubakode[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: karthikbhandari123@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

The prediction of stock costs has invariably been a difficult drawback for investors. available Market Prediction, the aim is to predict the long-run price of the monetary stocks of a corporation. The recent trend of available market prediction technologies is that the use of machine learning that makes predictions supported the values of current stock exchange indices by coaching on their previous values. Machine learning itself employs totally different models to create prediction easier and authentic. The paper focuses on the employment of Regression and LSTM primarily based on Machine learning to predict stock values. Factors thought of square measure open, close, low, high, and volume

Keywords

I Machine Learning, LSTM, Dataset, Stock, Stock exchange and Volume

COMPARATIVE ANALYSIS AND PERFORMANCE TESTING OF NODE.JS AND .NET

Siddharth Dayanand Bhat[1], Abhijit Banubakode[2]

1 MET Institute of Computer Science, Maharashtra, India
E-mail: dbgt4531@gmail.com
2 MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

Node.js and .NET are one of the most popular web development frameworks at current date. Though Node.js is considered as a good solution, if you desired to make a fast and lightweight web application. As on the other hand .NET is considered better for applications, which requires high CPU computation power. So, the main focus of this research paper will be to have a comparative analysis between Node.js and .NET on which tool will give a better performance over small task. As Node.js performs tasks asynchronously with a single thread and on the other hand .NET also performs asynchronous tasks but with multi-threading technique. So, the reason .NET is expected to perform all kinds of operations quicker than Node.js. Also, it is obvious that .NET would be able to better performance over applications which needs high CPU computation power, but what about small tasks? Will .NET be able to perform those tasks faster than Node.js, which is the thing we are going to find out in this research paper.

Keywords

Node.js, .NET, CPU computation power, comparative analysis, asynchronous

ETHICAL CONSIDERATIONS IN DATA COLLECTION, ANALYSIS, AND USAGE IN THE ERA OF BIG DATA

Sanjay Ganesh Bhavikatti[1], Abhijit Banubakode[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail – sbhavikatti199@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail - principal_ics@met.edu

Abstract

In the era of big data, where vast amounts of information are collected, analyzed, and used, ethical considerations play a crucial role in safeguarding individuals' rights. They also promote responsible data practices. This research paper explores the moral dimensions surrounding data collection, analysis, and usage of big data. It begins by examining ethical challenges arising from data collection, including privacy, informed consent, and transparency. The paper delves into the moral implications of data analysis, highlighting concerns related to bias, fairness, and the responsible handling of sensitive information. Additionally, it investigates ethical considerations surrounding data usage, focusing on potential risks, unauthorized access, and personal data commercialization. The paper reviews existing legal and regulatory frameworks for data ethics to provide a comprehensive perspective. Moreover, it surveys established ethical standards, guidelines, and best practices in the field. It finds effective strategies for promoting responsible behavior in big data collection, analysis, and usage. Drawing insights from case studies and real-world examples, this research paper elucidates ethical challenges across various domains. It concludes by emphasizing the importance of ethical principles and responsible practices in navigating big data complexities. This ensures individual rights protection and fosters data-driven decision-making trust.

Keywords

Ethical Considerations, Data Collection, Data Analysis, Big Data, and Privacy

INTEGRATION OF AUTONOMOUS CARS AND AI

Rohit Bhoye[1], Abhijit Banubakode[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: rohitbhoye2911@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

Autonomous cars are rapidly becoming a reality, with several companies investing heavily in their development. The success of these vehicles relies heavily on the integration of artificial intelligence technologies, such as computer vision and machine learning, to enable the vehicle to perceive its environment and make decisions accordingly. In this paper, we review the challenges and opportunities associated with the integration of autonomous cars and AI. We discuss the different types of AI technologies used in autonomous cars, including computer vision, natural language processing, and predictive analytics. We also examine the challenges associated with data processing, safety and security, and regulatory and legal frameworks. Finally, we explore the potential benefits of autonomous cars and AI, including reduced accidents and improved traffic flow. We conclude by highlighting the need for continued research and development in this field to ensure the safe and effective integration of autonomous cars and AI.

Keywords

Autonomous cars, AI and IOT

FUTURE OF 5G WIRELESS NETWORK SYSTEM IN INDIA

Siddharth Bhundere[1], Abhijit Banubakode[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: sidh1583@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

Future 5G wireless networks will aspect new contests, as well as growing network capacity to support a huge number of devices running applications necessitating high data rates, low tenancy and always-on connectivity; hugely and supportive the emerging business models in the wireless network market demanding networks to be more open. New challenges initiative new resolutions and involve changed plans in the network positioning, management, and operation of future 5G wireless networks equated to those of current wireless networks. One of the key purposes of future 5G wireless networks is to compliantly provide service-customized networks to a wide variety of services using integrated cloud reserve and wireless/wired network possessions, which may be presented by several infrastructure providers and/or operators. This paper will try to give a review about the Future of 5G wireless network technology in India.

Keywords

5G, network, connectivity, service, speed, technology, business, data

APPIAN & JAVA: COMPARATIVE ANALYSIS OF LOW-CODE AND TRADITIONAL CODING

Sudan Bobale[1], Abhijit Banubakode[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: bobalesudan777@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

Low-code development is rising in the industry due to its potential of speeding up software creation while cutting down on cost. Anyone can build their own applications with this technology using graphical interfaces and tools, without any prior coding knowledge. In this research paper, I am comparing Appian as a Low-Code Platform with Java as Traditional Programming. Appian is a low-code solution that assists businesses with streamlining processes and automation. Its user-friendly interface, pre-built connectors, and extensive range of features make it an attractive option for organizations of all sizes [1]. Comparing traditional and Low-code solutions, I discovered that Low-code development time is shorter, but maintenance and updating costs are lower using traditional code such as Java. Beneath research depicts the low code privileges over the traditional coding way in terms of flexibility, maintenance cost, time consumption, and flexibility to access for future use.

Keywords

Low-Code, Appian, Speed of Development, Cost Effectiveness, Scalability

MONGODB: A NOSQL DATABASE FOR SCALABLE AND FLEXIBLE DATA STORAGE AND RETRIEVAL

Shreya S Bonte[1] , Abhijit Banubakode[2]
[1]Student, MET Institute of Computer Science, Maharashtra, India
E-mail: shreyabonde@gmail.com
[2]Student, MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

MongoDB's capabilities, architecture, and use cases will be examined in this research paper, along with its advantages and disadvantages. We discuss how MongoDB's document-oriented data model, query capabilities, distributed architecture, and scaling methods make it the perfect solution for contemporary applications. We also go through optimization methods, best practices, and potential difficulties while using MongoDB. In the era of big data and real-time applications, we introduce MongoDB as a useful tool for businesses looking for effective data management solutions.

Keywords

No-SQL, MongoDB, Database, Scalability, Performance

STOCK MARKET PREDICTION USING SENTIMENT ANALYSIS

Rudresh Chalke[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: rudreshchalke023@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

Sentiment analysis, also known as opinion mining, is the process of using natural language processing, text analysis, and computational linguistics to identify and extract subjective information from source materials. This information can include opinions, attitudes, emotions, and evaluations of entities or events, and it is often used to gauge public sentiment about a particular subject. Sentiment analysis algorithms can classify text as positive, negative, or neutral, and they can also quantify the strength of the sentiment expressed. Sentiment analysis is used in a variety of applications, including marketing, politics, and customer service, to gain insight into public opinion and attitudes.

Keywords

Stock Prediction, VADER (Valence Aware Dictionary and sEntiment Reasoner), self-organizing fuzzy neural network (SOFNN)

THE IMPACT OF EMERGING TECHNOLOGIES SUCH AS 5G AND AUGMENTED REALITY ON MOBILE APP DEVELOPMENT

Atharva Deshpande[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: atharvadeshpande098@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

Mobile app development has been profoundly influenced by the rapid development of upcoming technologies such as 5G and augmented reality. The fifth generation of wireless cellular networks is designed to provide fast response time. Because 5G can deliver a lag-free connection across devices in different domains, we as developers can create more immersive and dynamic mobile applications. We examine the impact of 5G and augmented reality on mobile app development in this research paper as well as the multiple challenges that developers encounter when integrating these technologies into the various types of mobile apps that are already accessible.

Keywords

5G technology, Augmented reality, Mobile app development, User experience

SONARQUBE: A TOOL TO DISCOVER SOFTWARE METRICS AND TECHNICAL DEBT IN THE SOURCE CODE

Akshay Dhangada[1], Harshali Patil[2]

[1] MET Institute of Computer Science, Maharashtra, India
E-mail: akshd2000@gmail.com
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

The software development industry uses the static analysis of code extensively to find problems in software code. The popular open-source platform SonarQube offers tools for static analysis that can uncover programmer metrics and technical debt. This study examines the use of SonarQube as a tool for finding software metrics and technical debt using static analysis.

Keywords

SonarQube, Fault prediction, Software metrics, SQALE, Static Analysis, Technical Debt, Quality Attributes

IOT BASED SMART AGRICULTURE SYSTEM

Dipak Kamble[1], Harshali Patil[2], Abhijit Banubakude[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: deepakkamble33278@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu
E-mail: principal_ics@met.edu

Abstract

Smart agriculture is a new concept, because IoT sensors may provide information about agricultural fields and then act on it based on user input. The highlight of this work is the creation of a system that can track temperature, water and moisture levels, and even movement if it occurs in the field and threatens to kill crops using sensors and an Arduino UNO board. IOT sensors have the ability to provide information about agricultural fields and subsequently take action based on user input, making smart agriculture an emerging concept. The initiative attempts to use smart agriculture using automation and emerging technology, such as IOT. The software must be updated after hardware has been created in response to changes in requirements and technology. The new version of software refers to the changed hardware. It is necessary to test this new version to make sure the changes made to the old version function properly and do not introduce faults into other software components. This is essential because changing one piece of hardware could have unfavorable impacts on other pieces of hardware. The term "agriculture" refers to all things that were connected in a linear fashion to the food chain for human beings. As we all know, a soil, humidity, and temperature monitoring system based on Internet of Things technology is necessary in today's world. Nowadays, farmers need to learn the current status of their soil moisture, and in that case, occasionally their crops will die. Likewise, sometimes crops are in dangerous conditions due to an excess of water, and the quality of the soil decreases or it becomes salty, which will reduce production. Soil moisture and temperature in the environment monitoring systems are necessary to prevent this type of issue. It helps the farmer make decisions about his or her crops. Smart agriculture is currently one of the key IOT applications. Water and fertilizer waste is decreased with smart agriculture, and crop output is increased. Here, a method is suggested for employing sensors to measure temperature, humidity, and soil moisture in crop fields. If the soil moisture is low after monitoring these factors, the watering system can be automated.

Keywords

Internet of Things (IOT), Smart Agriculture using IOT, Arduino, Soil Moisture Sensor, Water level Sensor.

DESIGNING AIML-BASED CHATBOTS FOR MENTAL HEALTH SUPPORT: OPPORTUNITIES AND CHALLENGES

Vidushi Dubey[1], Harshali Patil[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: joinvidushi@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

Technology has a crucial role to play in creating scalable and accessible solutions for mental health support. The AIML programming language provides a viable framework for creating Chatbots that can help with mental health care. This study examines the possibilities and difficulties of developing AIML-based Chatbots with a focus on mental health support. The study covers current methods, discusses privacy issues, ethical issues, and how AIML might be integrated with mental health screening instruments. It also looks at the potential advantages and restrictions of AIML-based Chabots in this field. The research's findings and conclusions aid in the creation of responsible and efficient Chatbots systems for mental health.

Keywords

Chatbots, Depression, Machine Learning, Mental Health, Artificial Intelligence.

IMPACT OF BLOCKCHAIN IN INDIA

Shubham Durgavali[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: shubham.durgavali99@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

Blockchain is a technology that is being popularly used over the past few years and the demand for people or developers having knowledge about it has increased a lot. Blockchain is a digital ledger technology that allows secure and transparent transactions between two or more parties without the need for intermediaries. It is based on a decentralized network, where all the transactions are recorded and verified by multiple nodes in the network.Blockchain provides features such as transparency, security, immutability, and trust, making it a valuable tool for various applications such as supply chain management, finance, healthcare, and more. The innovation can possibly alter businesses by streamlining processes, reducing costs, and increasing efficiency.However, there are also challenges associated with blockchain, such as scalability, interoperability, and regulatory compliance. Despite these challenges, blockchain technology is rapidly evolving, and its adoption is increasing in various sectors around the world.

Keywords

Blockchain, government services, healthcare, supply chain management

NODE SECURITY IN URBAN FARMING

Ajinkya Gajbhiye[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: ajinxgajbhiye30@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail : harshalip_ics@met.edu

Abstract

Node security in urban farming is a modern day concept where one can grow crops according to their taste in a small area in their homes in urban areas where there is a scarcity of land and water both. Urban farming or urban vertical farming is a concept where a plant doesn't need soil and requires less water. Through this technology we can implement the regulation on some procedures like we can affect the timing related to the growth of the plant with the help of IOT devices and AI implemented in it. So, this is where security comes into picture as there is a need for AI and IOT devices. Security must be implemented in order to get a secure environment for the intelligence based modern day farming. Conventional agriculture faces numerous challenges, including waste reduction, meeting demand, preserving flavour, and ensuring nutrition. One potential solution to address these challenges is the use of contained environments under artificial climate control, also known as cyber-agriculture. These controlled environments have the potential to optimize plant characteristics such as mass, edible yield, flavour, and nutrients through a customized "climate recipe." By fine-tuning factors like light, water, nutrients, temperature, and other ecological variables, the desired flavour can be achieved. This paper presents a method that combines cyber-agriculture and urban vertical farming to optimize flavour in this manner.

Keywords

Massachusetts Institute of Technology (MIT), Artificial Intelligence (AI), vegetables

THE PROFOUND IMPACT OF IOT IN DAY-TO-DAY LIFE

Nikhil Gawandi[1], Prof. Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: nikhilgawandi40@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

The Internet of Things (IoT) has emerged as a transformative force, revolutionizing the way we live, work, and interacts with our surroundings. This abstract explores the profound impact of IoT on our day-to-day lives, highlighting the transformative effects it brings to various aspects of our existence. Our homes have undergone a revolutionary change thanks to IoT, becoming smart spaces where linked gadgets interact with one another to improve our efficiency, comfort, and productivity. IoT technology has made our homes more sophisticated and responsive to our needs, from voice-activated assistants that automate jobs to smart thermostats and lighting systems that reduce energy consumption. Real-time monitoring, automation, and process optimization of manufacturing operations are made possible by IoT, increasing operational effectiveness and reducing costs.Our daily lives have been significantly and fundamentally changed by IoT. Our homes, healthcare, transportation, and industries have all changed because of it. However, there are issues with data security and privacy. It is crucial to put a high priority on effective cyber security measures and user privacy protection in order to increase trust in IoT devices. Addressing these concerns is crucial for fully realizing the potential of IoT and creating a connected future that greatly benefits our lives.

Keywords

Internet of Things (IoT), local area networks (LANs), wide area networks (WANs)

ICC T20 CRICKET WORLD CUP 2023 WINNER PREDICTION USING MACHINE LEARNING TECHNIQUES

Avinash Gume[1], Harshali Patil[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: avinashgume@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

This paper predicts who will win the upcoming ICC T20 world cup 2023 One of the most liked team sports in the world is cricket.. Machine learning has served to amplify this magic and uncover the mystery. It has also been useful in the sporting domains. The sport of cricket is adored by billions of people who anxiously await the outcomes. For the purpose of predicting the winner of the T20 cricket world cup, we compared widely used machine learning algorithms. Using a unique accuracy metric, Decision Tree Algorithm emerged as the top machine learning algorithm among the constructed models. It achieved a 98.13% custom accuracy. India was determined to be the winner of the T20 global championship in this study. The ESPN Cricinfo dataset has been utilized for this purpose.

Keywords

Machine learning, T20 world cup 2023, winner prediction, Decision tree, random forest algorithm, KNN Algorithm

BRAIN COMPUTER INTERFACE

Bhavesh Indulkar[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: bhaveshindulkar866@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

Emerging technologies like brain-computer interfaces (BCIs) allow for direct brain-to-machine communication without the use of vocal or muscular movement. BCIs have a wide range of possible uses, from operating robots and boosting cognitive ability to providing medical care for people with impairments. The present status of BCI technology is discussed in this review study, along with its historical development, current developments, difficulties, and potential future possibilities. We look at the various varieties of BCIs, the uses for them, and the supporting technologies that make them work. We also go through the ethical issues that surround the creation and application of BCIs and highlight some of the major difficulties and openings for further study in this area.

Keywords

Brain Computer Interface, Neural Signals, Machine Learning, Neural Engineering, Brain Waves, Motor Imagery

BLOCKCHAIN – AN IMPLEMENTATION PERSPECTIVE

Akshay Iyer[1], Omprakash Mandge[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: sonuiyer@yahoo.co.in
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: omprakashm_ics@met.edu

Abstract

For decades the centralized system of processing transactions has been enforced; This system has several inherent vulnerabilities, The major one being "Single Source Of Truth" which has been exploited more than once by overzealous individuals/organizations. A solution to this conundrum is offered by a network that is "Decentralized"; not governed by any single person thereby eliminating the need to have trusted arbiters. "Peer-to-Peer"; co-ordination amongst multiple entities who are "Non-Trusting". Such a system offers great resilience against corruption and provides better accountability which is lacking in the modern world. This will enable in creating a better and a more equal society. This system is "Blockchain". In this paper we talk about multiple blockchain networks; how they vary, their nuances and what benefits they offer. We also provide a way to implement a blockchain system and how transactions can be processed and stored efficiently, a way to arrive at consensus using Proof Of Work and Proof Of Elapsed Time, implementation of NFTs and discuss results of a pilot run which uses a single peer.

Keywords

Blockchain, Bitcoin, Ethereum, NFT

COMPUTATIONAL ASTROPHYSICS USING MACHINE LEARNING

Shubham Surendra Jadhav[1], Omprakash Mandge[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-Mail: shubhamjadhav45sj@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-Mail: omprakashm_ics@met.edu

Abstract

This research paper explores the intersection of computational astrophysics and machine learning techniques to advance our understanding of celestial objects and phenomena. By leveraging the power of machine learning algorithms, computational astrophysics has the potential to enhance data analysis, enable predictive modeling, and accelerate scientific discoveries in the field of astrophysics. This paper presents an overview of the applications, methodologies, challenges, and future directions of computational astrophysics using machine learning.

Keywords

Astrophysics, Graph Neural Networks (GNNs), Reinforcement Learning (RL)

DRUG TRACEABILITY USING BLOCKCHAIN TECHNOLOGY

Vinayak Vijay Kadam[1], Omprakash Mandge[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-Mail: vinayakkadam935@gmail.com
[1] MET Institute of Computer Science, Maharashtra, India
E-Mail: omprakashm_ics@met.edu

Abstract

Healthcare supply chains are complex institutions that span many organizational and geographical boundaries, providing important backbone to routine activities. The innate complexity of such systems can create impurities such as incorrect information, a lack of transparency, and a lack of data provenance. Counterfeit medications are one result of such constraints within existing supply chains, which not only have a profound negative impact on human health but also cause significant economic loss to the healthcare business. As a result, previous research has emphasized the importance of a comprehensive, end-to-end track and trace system for pharmaceutical supply chains. As a result, an end-to-end product tracking system throughout the pharmaceutical supply chain is critical to maintaining product safety and eradicating counterfeits. The majority of contemporary track and trace systems are centralized, which compromises data privacy and transparency.

Keywords

Blockchain, drug counterfeiting, traceability, healthcare, supply chain, trust, security

IOT APPLICATIONS IN HEALTHCARE: REVOLUTIONIZING PATIENT CARE AND HEALTH MONITORING

[1] MET Institute of Computer Science, Maharashtra, India
E-Mail: rohuannya@gmail.com

[2] MET Institute of Computer Science, Maharashtra, India
E-Mail: omprakashm_ics@met.edu

Abstract

The delivery and monitoring of patient care have been revolutionized by the Internet of Things (IoT), which has emerged as a technology that is changing the game in the healthcare sector. This study examines the numerous uses of IoT in healthcare, emphasizing its potential toboost patient outcomes, raise operational effectiveness, and enable individualized care. We delve into specific IoT applications in healthcare, such as wearable healthcare technology, smart medical devices, and hospital automation systems. We also go over the advantages, difficulties, and potential future directions of IoT implementation in healthcare, highlighting the necessity of strong security and privacy measures. We shed light on how IoT is revolutionizing the healthcare industry and influencing the future of patient care through this thorough analysis. Keywords: Internet of Things (IoT), healthcare, patient care, health monitoring, remote patient monitoring, smart medical devices, wearables, hospital automation, security, privacy.

Keywords

Internet of Things (IoT), hospital automation systems, Health Monitoring

OFFENSIVE LANGUAGE DETECTION

Darshan Kanade[1], Flavia Gonsalves[2]
1 MET Institute of Computer Science, Maharashtra, India
E-Mail: Darshankanade4@gmail.com
2 MET Institute of Computer Science, Maharashtra, India
E-Mail: Flaviag_ics@met.edu

Abstract

The Internet community is facing a widespread problem of offensive behavior. People feel emboldened by the anonymity online and engage in offensive communication that they wouldn't consider in real life. This toxic online speech has become a significant issue due to the increasing number of people from various cultures and educational backgrounds using the internet. To address this problem, governments, online communities, and companies are investing in preventing offensive content on social media. One effective solution is the use of computational techniques to identify and take action against offensive content. However, determining whether a text message contains hate speech or offensive language is a challenging task for automatic detection. Currently, online discussion platforms rely on human moderators to check user comments for offensive language and rule violations. The moderators decide which comments to remove and which ones to keep. While machine learning models have shown promising results in classifying offensive content, human moderators are still preferred because they can provide explanations for their decisions.

Keywords

Offensive detection, social media, toxic online speech

LEARNING TACTICS AND MAKE HACK-FREE REAL TIME STRATEGY GAMES USING ARTIFICIAL INTELLIGENCE

Bhoomika Kavale[1], Omprakash Mandge[2]

1MET Institute of Computer Science, Mumbai, Maharashtra, India
E-Mail: bhoomikakavale98@gmail.com
2MET Institute of Computer Science, Mumbai, Maharashtra, India
E-Mail: omprakashm_ics@met.edu

Abstract

Artificial Intelligence tactics have been successfully applied to several computer games. However, in real time strategy games, traditional AI fails to play at human level because of vast search spaces that they entail. Here we present the real time case-based planning and execution approach designed to deal with RTS games. Also, we are going to learn probabilistic behavior models in RTS. Building a human level AI to beat the human player. We describe a method to prevent cheating or hacking in RTS games, as well as strategies to limit the state exposure to clients in this paper. Discuss about cheating Hack-free gaming environments using different toolkits. We also have done a public survey about what changes they would love to see an RTS games using AI.

Keywords

RTS, ORTS, Tactical Assault Battles, Hacking, Cheating, Information Exposures to Cheaters, Influencing Maps

IMPACT OF AI IN DAY-TO-DAY LIFE

Pranit Khakal[1], Abhijit Banubakode[2]

[1]MET Institute of Computer Science, Mumbai, India
E-Mail: khakal.pranit2000@gmail.com
[2]MET Institute of Computer Science, Mumbai, India
E-Mail: principal_ics@met.edu

Abstract

Artificial Intelligence (AI) has become an integral part of our daily lives. This research paper aims to provide a comprehensive review of the impact of AI on day-to-day life, exploring the opportunities and challenges associated with AI adoption in various domains. The paper begins by discussing the fundamental concepts and techniques of AI, highlighting how machine learning, natural language processing, and computer vision enable AI systems to learn, reason, and interact with humans. It also examines the evolution of AI technology, from rule-based systems to deep learning algorithms, and its current state of development. Overall, this research paper provides valuable insights into the transformative power of AI in day-to-day life, highlighting its potential to revolutionize various domains. By understanding the current landscape and future prospects, policymakers, businesses, and individuals can harness the capabilities of AI to create a more efficient, sustainable, and equitable society.

Keywords

Artificial Intelligence (AI), Virtual reality (VR), Day-to-Day Life

WILL A.I. REPLACE PROGRAMMERS?

Shrihari Khawase[1], Flavia Gonsalves[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: srkhawase@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: flaviag_ics@met.edu

Abstract

As advancements in artificial intelligence (AI) continue to reshape various industries, concerns have arisen about the potential replacement of programmers by intelligent machines. This research paper explores the question of whether AI will replace programmers, leaning in favour of the indispensable role of human programmers in the evolving technological landscape. By analysing current AI capabilities, limitations, and trends, it becomes evident that while AI can automate certain aspects of programming, it lacks the creativity, critical thinking, and contextual understanding required for complex software development. The paper highlights the need for programmers to adapt their skill sets to collaborate effectively with AI, emphasizing the symbiotic relationship between human intelligence and machine learning. By leveraging AI tools, programmers can enhance their productivity and efficiency, leading to increased innovation and expanded opportunities in the field. In conclusion, AI is an enabler, augmenting and empowering programmers rather than replacing them.

Keywords

Artificial intelligence, programmers, automation, collaboration, skill adaptation, innovation

AUTOMATE THE WORLD AUTOMATION WITH: SELENIUM

Sumedh Khuje[1], Flavia Gonsalves[2]
[1]MET Institute of Computer science, Maharashtra, India
E-Mail: sumedhkhuje007@gmail.com
[2]MET Institute of Computer science, Maharashtra, India
E-Mail: flaviag_ics@met.edu

Abstract

Software testing is one of the vital and crucial phase of software development lifecycle. Today many software applications are developed as web based application that runs directly through Internet browser. The importance of controlling and improving the quality of web applications will increase its economic relevance. Automation testing decreases the test cost and increases work efficiency to deliver a high quality and stable product at the end. Web applications are flattering additional complexity that applications are difficult to test manually. It will increase the time and cost. Accurate results can't be provided. This can be avoided by using test automation. The objective of the paper is to make test automation intended for Web applications using Software testing tool, Selenium. It is a collection of testing tool running with multiple browsers, operating systems and many programming languages. Selenium contains almost all the characteristics to automate tests and it is used to build test cases for web applications.

Keywords

Selenium, Automation Testing Tools, Analysis, Selenium framework, Selenium components

FRAUD PREVENTION IN BANKING USING BLOCKCHAIN

Kirti Vichare[1], Flavia Gonsalves[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-Mail: vicharekirti981@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-Mail: flaviag_ics@met.edu

Abstract

Blockchain technology is a foundational technology with intriguing financial applications. Blockchain is a notion in financial technology that has gotten a lot of attention recently (FinTech). Distributed data storage, point-to-point transmission, consensus methods, and encryption techniques are among the computer technologies used. It has also been labeled as a disruptive Internet-era breakthrough. However, because blockchain represents a huge advance in data storage and transmission, it has the potential to fundamentally disrupt existing financial and economic operating paradigms, resulting in a new wave of technological innovation and industrial transformation within the industry.

Keywords

Fraud prevention, Blockchain technology, banking industry

A STRATEGIC APPROACH TO CLOUD DATA SECURITY

Neha Lad[1], Flavia Gonsalves[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-Mail: ladnehanl@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-Mail: flaviag_ics@met.edu

Abstract

Cloud computing is a model for delivering computing services over the internet, which involves outsourcing data and applications traditionally stored on users' computers to remote servers or datacentres owned, administered, and managed by third-party providers. This paper provides an overview of data security issues in cloud computing, which refers to the use of computer resources as a service on-demand via the internet. The paper outlines the principal issues related to data security in the cloud environment, which have been classified into three categories. Firstly, the paper addresses data security issues that arise from the unique characteristics of a single cloud compared to traditional infrastructure. Secondly, the paper discusses data security issues related to the data life cycle in cloud computing, including stored, used, and transferred data. Lastly, the paper outlines data security issues associated with data security attributes, such as confidentiality, integrity, and availability. The paper also highlights common solutions used to secure data in the cloud for each category. This paper aims to provide a comprehensive understanding of data security issues in cloud computing and offer insights into the measures that can be taken to secure data in the cloud.

Keywords

Cloud Computing, Security and privacy, Data-at-rest, Data-in-transit Data-in-use

PREDICTING THE WINNER OF CRICKET T20 WORLD CUP USING MACHINE LEARNING ALGORITHMS

Vaibhav Lakhamale[1], Flavia Gonsalves[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-Mail:vaibhavlakhamale7@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-Mail: flaviag_ics@met.edu

Abstract

The Cricket T20 World Cup is a highly anticipated international cricket tournament that is held every two years. With the growing popularity of the game, predicting the winner of this tournament has become a hot topic of research in the field of machine learning. In this paper, we propose a predictive model that uses machine learning algorithms to analyze historical data of teams and players to predict the winner of the Cricket T20 World Cup.

Keywords

Cricket, Prediction, Data

GREEN CLOUD COMPUTING ADOPTION IS GROWING IN BUSINESSES

Karan Mahadik[1], Flavia Gonsalves[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-Mail: karanmahadik2708@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-Mail: flaviag_ics@met.edu

Abstract

Green Cloud Computing is the study of designing, developing, and using digital devices that minimize the carbon footprint and create a sustainable environment. As part of an initiative to implement Green Cloud Computing, all major public cloud providers like Microsoft, AWS and Google have adopted renewable energy resources for operating their data centers. This is a necessity today as global warming levels continue to rise across the planet. As more and more businesses shift towards cloud, it is important for all cloud providers to adopt green cloud computing. It talks about the applications and challenges being faced for the implementation of green clouds.

Keywords

Cloud Computing, Green Cloud Computing, Public Cloud

ENHANCING CYBER ATTACK DETECTION AND PREVENTION USING MACHINE LEARNING

Yogesh Maurya[1], Flavia Gonsalves[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: Yogeshma666@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: flaviag_ics@met.edu

Abstract

As the threat landscape of cyber-attacks continues to evolve, there is a pressing need for effective preventive measures to safeguard critical systems and data. This research paper explores the development of a machine-learning model for predicting and preventing cyber-attacks. The study focuses on leveraging machine learning algorithms and techniques to enhance cyber-attack detection and prevention capabilities. The literature review highlights the challenges and limitations of existing approaches to cyber-attack prediction and prevention, emphasizing the need for more advanced models. The methodology section outlines the study design, data sources, and the feature engineering process. Ethical considerations and limitations of the study are also discussed. The findings of this research highlight the potential of integrating machine learning for improving cyber-attack detection and prevention. The developed model offers a novel approach that can enhance the effectiveness of existing cyber security systems. The study contributes to the growing body of knowledge in the field of emerging technologies and their application in the context of cyber security. The practical applications of the model are discussed, along with the evaluation of ethical implications related to the utilization of machine learning models for cyber security. The research aims to provide valuable insights and recommendations for practitioners and researchers working in the field of cyber security, fostering advancements in preventive measures against cyber-attacks.

Keywords

Cyber Attack, Cyber Security Systems

CRYPTOCURRENCY AND DIGITAL PAYMENT SYSTEMS: RISKS AND CHALLENGES

Jaya Mohare[1], Flavia D. Gonsalves[2]
[1] MET Institute of Computer, Science, Maharashtra India
E-mail: jayamohare123@gmail.com
[2] MET Institute of Computer, Science, Maharashtra India
E-mail: flaviag.ics@met.edu

Abstract

This research paper explores the opportunities and risks associated with cryptocurrencies and digital payment systems. With the emergence of cryptocurrencies like Bitcoin and Ethereum, traditional financial institutions are being challenged, and new possibilities for financial transactions are being introduced. This paper investigates the drivers behind the adoption of cryptocurrencies by financial institutions, the challenges faced in integrating these technologies, and the potential benefits and risks involved. Additionally, the regulatory considerations and future outlook of cryptocurrencies and digital payment systems are discussed.

Keywords

Cryptocurrency, Bitcoin, Blockchain

ARTIFICIAL INTELLIGENCE (AI) IN SURGERY

Sushant Nadkarni[1], Flavia Gonsalves[2]

[1] MET Institute of Computer Science, Maharashtra, India
E-mail: nadkarnisushan@gmail.com

[2] MET Institute of Computer Science, Maharashtra, India
E-mail: flaviag_ics@met.edu

Abstract

Artificial intelligence (AI) has emerged as a transformative technology in the field of surgery, revolutionizing various aspects of patient care, surgical procedures, and clinical outcomes. This paper presents a comprehensive review on the role of abstraction techniques in AI-powered surgical applications, focusing on their impact, challenges, and future prospects. Abstraction refers to the process of simplifying complex surgical data and knowledge representations, enabling efficient analysis, decision-making, and automation within surgical workflows.

Keywords

Artificial intelligence, surgery, image-guided surgery, robotic-assisted surgery, surgical decision support systems

THE USE OF MACHINE LEARNING IN FINANCIAL FORECASTING

Aditya Newalkar[1], Chetna Achar[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: adityanewalkar2000@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

This paper aims to explore the use of machine learning in financial forecasting and the various algorithms used for the same. In this work, machine learning methods for stock market forecasting are reviewed. One difficult challenge of financial time series prediction is the forecasting of stock markets. We analyze the benefits and drawbacks of recent improvements in stock market prediction models in this paper. Additionally, we look at numerous world events and the difficulties in forecasting stock markets. According to the results of this survey, adding event data to the prediction model is crucial for producing predictions that are more accurate.

Keywords

Machine Learning, Financial Forecasting, Algorithms

DOOR LOCK AUTOMATION USING IOT

Deepesh palsamkar[1], Chetna Achar [2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: Deepeshpalsamkar189@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: chetnna_ics@met.edu

Abstract

IoT is a giant, digitally connected universe of billions of physical devices around the world; “things” that collect and share data about how they’re used and the environment around them. These objects are embedded with internet connectivity, software, sensors, and other hardware that enable them to connect and exchange data with other systems and devices over the web. IoT extends the power of the internet beyond smartphones and computers to ordinary household objects such as lightbulbs, locks, smart microwaves, wearable fitness devices, sophisticated industrial tools, and self-driving cars, affordin them a higher degree of analytical and computing capabilities

Keywords

Various control systems have been designed over the years to prevent access to unauthorized user. The main aim for providing locks for our home, school, office, and building is for security of our lives and property. It is therefore important to have convenient way of achieving this goal. Today, most mobile phones are a 'smart phone', which offers more advanced capabilities in connectivity issues than regular cell phones.

VIRTUAL MACHINE THREAT DETECTION

Krishna Pande[1], Chetna Achar[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: krishnapande723@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

With the development of computer technology, the concept of virtualization has grown rapidly. However, threats like crypto mining malware inside virtual machines increased recently. Virtual Machine Threat Detection (VMTD) is used to detect threats like crypto mining malware inside virtual machine. This paper discuss about the different cloud technology models that is used to detect the crypto mining malware threats inside virtual machine. In the existing models, software agents are deployed in guest virtual machine to detect threats. To overcome the existing model, VMTD collect signals to aid in threat detection without requiring customers to run additional software. VMTD, which is made available through the Security Command Centre, that helps in finding the error or defect & susceptibility if any and makes sure to fix those by giving recommendations or suggestions.

Keywords

Google Cloud, crypto mining, Security Command centre, VMTD.

THE CRYPTO CONUNDRUM: ASSESSING THE POTENTIAL FOR A FINANCIAL FIASCO

TAUHID PATEL[1], CHETNA ACHAR[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
Email: tauhidpatel18@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
Email: chetnaa_ics@met.edu

Abstract

Cryptocurrency also known as Crypto is a digital or virtual currency that is secured by cryptography, making it difficult to counterfeit or double-spend. Unlike traditional currency, cryptocurrency operates independently of a central bank and can be exchanged directly between individuals without the need for intermediaries. This paper provides an overview of cryptocurrency, including its history, how it works, and its current state.

Keywords

Cryptocurrency, bitcoin, etheruem, NFT, Satoshi Nakamoto

USE OF VIRTUAL REALITY IN ARMED FORCES

Ashutosh Pawar[1], Chetna Achar[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: pawar4shutosh@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

Virtual reality (VR) technology has gained significant attention

in recent years due to its potential for revolutionizing military operations and training. This research paper explores the diverse applications of virtual reality in the armed forces and examines its strategic implications for modern warfare. The benefits and challenges of its application are assessed, taking into account factors such as cost, technical limitations, and cyber security concerns. By examining the current state of VR technology and its integration into military practices, this research paper provides valuable insights into the strategic utilization of virtual reality in armed forces, highlighting its potential to enhance operational readiness, decision-making, and overall effectiveness in the modern battlefield.

Keywords

Virtual Reality (VR), Armed Forces, Training, Simulation, Military

A SMART PRODUCING SERVICE SYSTEM SUPPORTED EDGE COMPUTING, FOG COMPUTING, AND CLOUD COMPUTING

Vaibhav Subhash Pawaskar[1], Chetna Achar[2]

[1]MET Institute of Computer Science, Maharashtra, India
E-mail: vaibhavpawaskar11@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

The progressive technologies in new generation information technologies (New IT) greatly stimulate the event of smart manufacturing. In an exceedingly terribly smart manufacturing setting, further and extra devices would be connected to the net thus Associate in Nursing oversized volume of knowledge are usually obtained throughout all phases of the merchandise lifecycle. Cloud-based smart manufacturing paradigm facilitates a replacement reasonably applications and services to analysis Associate in Nursing oversized volume of information and alter large- scale manufacturing collaboration. However, different factors, similar to the network inconvenience, full metric, and latency time, require its availability for high-speed and low-latency amount of your time applications. Fog computing and edge computing extended the cipher, storage, and networking capabilities of the cloud to the sting, which could respond to the preceding issues.Supported cloud computing, fog computing, and edge computing, in this paper, a hierarchy reference style is introduced for smart manufacturing. The planning is anticipated to be applied at intervals the digital twin geographical point that opens a bright perspective of recent applications at intervals the field of producing.

Keywords

Cloud Computing, digital twin, edge Computing, fog computing, hierarchical architecture, smart manufacturing

REVIEWING BIASES IN LARGE LANGUAGE MODELS

Dione Pereira[1], Chetna Achar[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: dione.serrap@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

Large language models (LLMs) and applications built on such models have brought revolutionary changes to the field of natural language processing (NLP). However, researchers of this field and these models have long highlighted concerns regarding inherent bias and its implications for real-world deployment. This paper outlines the development in the field of NLP, from its initial phases to the emergence of deep learning and the development of LLMs. Further, it reviews the current literature and research available that highlights different biases prevalent in LLMs, including currently popular models like GPT-3. This review aims to underscore the need to recognize, address, and spread awareness of the bias prevalent in outputs of these models among general users.

Keywords

Large models, NLP, Bias

CHAT GPT : CASE STUDY

Abu Rafey[1], Chetna Achar[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: rafeyshaikh2763@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

Chat GPT is a large language model developed by OpenAI based on the GPT-3.5 architecture. It is a powerful AI language model that has the ability to perform various natural language processing (NLP) tasks including language translation, text summarization, chatbots, and more. In this paper, we provide an overview of Chat GPT, its architecture, its potential applications, and future scope.

Keywords

Chat GPT, AI-Based Chatbots,

A COMPARATIVE ANALYSIS ON JAVA MVC FRAMEWORKS

Nikita Rathi[1] , Chetna Achar[2]
[1] MET Institute of Computer Science, Mumbai, India
E-mail: rathi.nikita7@gmail.com
[2]MET Institute of Computer Science, Mumbai, India
E-mail: chetnaa_ics@met.edu

Abstract

This research paper investigates the Model-View-Controller (MVC) framework, its principles, benefits, and future directions. It explores the core components of MVC and highlights its advantages, such as code organization, scalability, and testability. Real-world examples illustrate its successful implementation. The paper examines the evolution of MVC, challenges in complex applications, and proposed solutions. It explores the integration of MVC with emerging technologies like micro services and event-driven architecture. Finally, it presents potential advancements and open challenges, providing a valuable resource for developers, architects, and researchers.

Keywords

MVC Framework, Java Framework, Spring MVC, Struts, Play

THE EVOLUTION OF THE OPERATING SYSTEM AND ITS FUTURE CHALLENGES

Ryan Rodrigues[1], Abhijit Banubakode[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: ryanrodriguesnirmal@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

The operating system is the most essential part of the computer system that is used in all types of computing devices like mobile, smartphone, tablets and other various types of computer systems. The operating systems provides user interface to form communication between application software and the hardware systems of the computer network. The primary functions of the OS is to configure the system 's software and hardware components and check whether the requested running application program is compatible for performing execution of the system. During the mid-19th century there were huge bulky computers that would enlarge to the room size that were more expensive to purchase and maintain .The operating system used in those days were consisting of hardware configurations and were used to manage the machine level systems. Those systems were used to control the overall computer machine level performances. The operating system allocates resources from its source elements to the application program to perform a particular task. The OS communicates from software to hardware, from hardware to network systems. The kernel is the main part of the operating system which performs all the user-based executions of the programs through OS environment provided by the kernel system. Kernel is the hardware chip present inside the microcontrollers of the operating systems. The kernel provides keys for accessing the communication between software programs and hardware assembly level devices. Every operating system consists of different types of structures , features compositions , and varieties of domains based on their usage in real world applications .The OS have embedded systems like Time-processing systems , Time-sharing Processing scheduling systems , Clock synchronizations , Multi-tasking systems. This feature enables OS to schedule tasks for smooth performing of the systems that contains software accounting for Time allocation of processor, storage size, resources allocations Users didn't had access to control or interact with the computer system. Now a Day, the modern operating system consists of GUI that is user-friendly interface. Where a user-end can also gain functionality access control inside the computer software as well as hardware environment .The user can basically perform more operations on the computer with higher efficiency. The operating systems consists of 5 major features they are as follows

1) Micro-processing units(CPU)
2) Input/output devices
3) ROM/RAM Memory
4) Peripheral storage devices
5) Micro-controller Unit

Keywords

Operating System, Micro-controller Unit

FAKE NEWS CLASSIFICATION USING MACHINE LEARNING

Sakshi Narkar[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: sakshinarkar04@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract

The technology! The terms itself defines the progress as well as regress. While the adoption of new technology has led to significant growth in productivity, it has also returned in the loss of certain jobs in certain industries. The term “fake” generally means not genuine or not real. It can be used to describe something that is counterfeit or fraudulent, or something that is not what it appears to be. Let say a person might say that a designer handbag they bought online was "fake" because it was actually a poorly made knockoff, or they might say that a news story was "fake" because it was made up or misleading.

Keywords

Fake News, Natural Language Processing (Nlp), Deep Structured Semantic Model (Dssm)

NATURAL LANGUAGE PROCESSING WORKING AND CHALLENGES

Manas Samant[1], Harshali Patil[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: manas2592000@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: harshalip_ics@met.edu

Abstract:

Language is a means of expressing your thoughts. Language improves our ability to comprehend the world and gives us a deeper grasp of it. Speakers may use language to be as ambiguous or exact as they would want. The term "natural language processing" (NLP) refers. The languages that individuals speak naturally are known as natural languages. Everything a computer needs to comprehend natural language is encircled by natural language processing, which also produces natural language. The area like computer science, AI, and linguistics "natural language processing" (NLP) are primarily concerned with how computers interact with "natural languages." The domain of the human computer interaction is the main focus of NLP. Another reason for the need NLP is the very large amount of information that has been captured or kept in natural language and is accessible by computer. Books, news, business and government reports, scientific studies, and other information are regularly generated; many of them may be found online or even in some documents. A system needs a lot of data to understand plain language in order to access most of the data stored on computers. Natural language processing[NLP] is a difficult field in which we must create data, evaluate data and examine the date.

Keywords

Natural language Processing i.e., NLP, Deep learning, Machine learning, Artificial intelligence

AUGMENTED REALITY IN EDUCATION

Shubham Sankpal[1], Omprakash Mandge[2]

[1]MET Institute of Computer Science, Maharashtra, India
E-mail: sankpalshubham.3636@gmail.com
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: omprakashm_ics@met.edu

Abstract

Augmented reality (AR) is a rapidly developing technology that has the potential to revolutionize the way students learn in the classroom. AR technology allows students to interact with digital content in the real world, providing a more engaging and immersive educational experience. This research paper explores the use of augmented reality in education, its benefits, challenges, and future potential. The study also examines various AR tools and applications used in the classroom, and the impact of AR technology on student learning outcomes.

Keywords

Augmented Reality, Virtual Reality, Educational System

AUTOMATION IN AIR TRAFFIC CONTROL USING ZIGBEE AND ULTRASONIC RADAR

Santosh Sule[1], Lavina Jadhav[2]
[1]MET-Institute of Computer Science, Mumbai, India
E-mail: santosh.sule.24@gmail.com
[2]MET-Institute of Computer Science, Mumbai, India
E-mail: lavinajdhv@gmail.com

Abstract

In current years, masses of aircraft crashes had been befell due to poor climate situations and miscommunication among floor station operators. The reason behind putting forward this paper is for self-regularization in the monitoring system of air traffic and dodging of airship mishaps.

Hence to restore human interruption by introducing automated systems to dispense safety and reliable runways along with advanced monitoring systems this ideal has been developed.

Keywords

Air Traffic Control, Zigbee, Airship Module

SALES PREDICTION

Nihar Save[1] , Lavina Jadhav[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: niharsave17@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: principal_ics@met.edu

Abstract

Sales forecasting is an essential task in retailing. In particular, consumer oriented markets such as fashion and electronics face uncertain demands, short life cycle and a lack of historical sales data which strengthen the challenges of producing accurate forecast. In this analysis, a forecasting model is developed using machine learning algorithm to improve the accurately forecast product sales. The proposed model is especially targeted to support the future purchase and more accurate forecasts product sales and is not intended to change current subjective forecasting methods.

This project aims on creating an website which will predict the Sales of an product at the given month on the basis of history of sales of that product to that place.

Keywords

Sales prediction, Machine learning, ARIMA & SARIMA Model Forecasting

COMPARISON BETWEEN MICROSERVICE AND MONOLITHIC ARCHITECTURE

Nidhi Sawant[1] , Flavia Gonsalves[2]
[1] MET Institute of Computer Science, Mumbai, India
E-mail: nidhi.sawant27@gmail.com
[2] MET Institute of Computer Science, Mumbai, India
E-mail: flaviag_ics@met.edu

Abstract

Software architecture plays a critical role in determining the success of modern software systems. Monolithic architecture has been the traditional approach for building large-scale applications, while micro services architecture is gaining popularity in recent years. This paper compares the two architectures and provides insights into their strengths and weaknesses. The research analyzes various factors, including scalability, flexibility, performance, resilience, and maintenance, to determine which architecture is suitable for specific applications.

Keywords

Software Architecture, Monolithic, Micro services,

CLOUD COMPUTING IN BUSINESS

Veekesh Kumar Sing[1], Chetna Achar[2]
[1]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: singhofficial2408@gmail.com
[2]MET Institute of Computer Science, Mumbai, Maharashtra, India
E-mail: chetnaa_ics@met.edu

Abstract

Cloud computing has become an indispensable technology for businesses, revolutionizing the way they manage and leverage IT resources. This research paper explores the impact of cloud computing on businesses and its role in driving digital transformation. It examines the benefits, challenges, and considerations associated with adopting cloud computing in a business environment. The paper highlights scalability and flexibility as key advantages, enabling businesses to adapt to changing demands and optimize resource allocation. Cost efficiency is another significant benefit, as cloud services eliminate the need for extensive on-premises infrastructure investments. Accessibility and collaboration are enhanced through cloud-based solutions, enabling remote work and seamless teamwork. Data backup and disaster recovery mechanisms offered by cloud providers ensure business continuity and protect against data loss. Security measures implemented by cloud providers mitigate risks and enhance data protection. Furthermore, cloud computing enables businesses to leverage emerging technologies and drive innovation, gaining a competitive edge in the market. While cloud computing offers numerous advantages, challenges such as data privacy, vendor lock-in, and potential disruptions need to be carefully considered. This research contributes to the understanding of cloud computing's impact on businesses, providing insights for organizations considering cloud adoption and strategies for maximizing the benefits while mitigating risks.

Keywords

Cloud Computing, Hybrid Cloud, Edge-To-Cloud

ACTION QUALITY ASSESSMENT ON PERSONAL TRAINING EXERCISES AT HOME DURING PANDEMIC

Robin Singh[1], Lavina Mistry[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail:-robbansingh220@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail:- lavinaj_ics@met.edu

Abstract

The project focuses mainly on how efficiently the user performs his and her exercise which can help them optimize the casualties that are associated with improper form of their exercise. One of the significant research papers in Computer Vision field especially in Human Pose Estimation. In this paper, pose estimation and Deep machine learning technique are combined to analyze the performance and report feedback on the repetitions of their exercises performed in real time. Machine Learning when combined with fitness industry could be useful for the user to keep track on their exercise. The proposed method divides respectively in three phases; pose tracker to identify and track user exercise recognition to detect the repetition.

Keywords

Action Quality Assessment, Part Affinity Fields (PAFs), Large Amplitude Movement

LOW CODE DEVELOPMENT COMPARED TO TRADITIONAL DEVELOPMENT

Harsh Singh[1], Lavina Jadhav[2]
[1]MET-Institute of Computer Science, Mumbai, India
E-mail: harshsinghzero@gmail.com
[2]MET-Institute of Computer Science, Mumbai, India
E-mail: lavinajdhv@gmail.com

Abstract

This study compares the effects of low-code development platforms to conventional coding methods. It examines the cost-effectiveness, customization options, development time, and cooperation prospects of low-code platforms. According to the report, low-code platforms can drastically cut down on development time, enabling quicker app development and market release. Low-code platforms enable simple customization through user-friendly interfaces, whereas traditional coding offers greater flexibility and control. Low-code environments encourage collaboration and allow numerous users to work at once. Low-code platforms seem to be more cost-effective, particularly for small businesses. For better long-term management, larger businesses could prefer traditional code. The study comes to the conclusion that low-code platforms are becoming more and more popular since they save time and money, and promote collaboration. The choice between low-code and traditional coding depends on specific project requirements and considerations of customization and control.

Keywords

Low-code, Traditional code, Development

CHAT-GPT: FAD OR FUTURE?

Syed Faiz Ahmed[1], Lavina Jadhav[2]
[1]MET-Institute of Computer Science, Mumbai, India
E-mail: sfaizresearch@gmail.com
[2]MET-Institute of Computer Science, Mumbai, India
E-mail: lavinaj_ics@met.edu

Abstract

This research paper investigates the significance and future potential of ChatGPT, along with other similar AI tools, in the realm of conversational AI. The study aims to assess the capabilities, limitations, and potential applications of ChatGPT and its counterparts through an in-depth analysis of existing literature, real-world use cases, and user feedback.The research methodology employs a mixed-methods approach, combining quantitative analysis of user surveys and qualitative exploration through expert interviews. The paper examines the unique features and strengths of ChatGPT, such as its natural language generation and conversational abilities, and compares it with other prominent AI tools in the field, including BERT, Watson Assistant, and Amazon Lex.By critically evaluating the strengths and limitations of ChatGPT and its counterparts, this study provides insights into their potential applications across diverse domains. It analyses real-world scenarios where these AI tools have been implemented, such as customer support, virtual assistants, and educational platforms, to uncover their impact and effectiveness.Furthermore, the research explores challenges faced by these AI tools, such as biases, contextual understanding, and ethical considerations. It also examines user perceptions, adoption trends, and areas of improvement for enhancing user experiences and trust.The findings of this study contribute to a comprehensive understanding of the current landscape of conversational AI and shed light on the future prospects of ChatGPT and similar AI tools. The analysis aims to inform researchers, practitioners, and decision-makers about the benefits, limitations, and potential implications of incorporating these tools into various applications.Ultimately, this research paper offers valuable insights into the trajectory of ChatGPT and similar AI tools, providing a foundation for future advancements and innovations in the field of conversational AI

Keywords

ChatGPT, OpenAi, AI, NLP, Deep Learning.

COMPARATIVE ANALYSIS BETWEEN MVC AND MVVM ARCHITECTURE IN ANDROID

Ashwini Tandan[1], Lavina Jadhav[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: ashwinitandan@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: lavinaj_ics@met.edu

Abstract

This research paper aims to compare and analyze two popular architectural patterns in Android development: Model-View-Controller (MVC) and Model-View-View-Model (MVVM). The paper examines the key characteristics, advantages, and disadvantages of each pattern and provides insights into their applicability, maintainability, and testability in Android applications. The research findings aim to help developers make informed decisions when choosing between MVC and MVVM for their Android projects.

Keywords

Android development, MVC, MVVM

BEHIND THE SCENES OF SPEECH RECOGNITION TECHNOLOGY AND ITS APPLICATIONS IN THE HEALTH SECTOR

Anushka Vaidya[1], Lavina Jadhav[2]
[1]MET Institute of Computer Science, Maharashtra, India
E-mail: vaidyaanushka11@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: lavinaj_ics@met.edu

Abstract

Speech recognition has become an important technology in our daily lives, from voice-activated virtual assistants to dictation software. However, this technology can be affected by variations in accent, which can lead to inaccuracies in speech recognition. In this paper, we explore the background details of speech recognition technology, including the challenges posed by different accents and strategies to improve the accuracy of speech recognition for diverse accents.Speech recognition technology has seen significant advancements in recent years, but the accuracy of these systems can be affected by factors such as accent, dialect, and other variations in speech patterns. The ability of speech recognition systems to accurately transcribe speech in different accents is an important area of research.

Keywords

Health Sector, Speech Recognition, Automatic Speech Recognition (Asr)

THE IMPACT OF TECHNOLOGY ON READING

Aman Devendra Kumar Verma[1], Lavina Jadhav [2]

[1]MET Institute of Computer Science, Maharashtra, India
E-mail: av986764@gmail.com
[2]MET Institute of Computer Science, Maharashtra, India
E-mail: lavinaj_ics@met.edu

Abstract

People's dependence on the internet is growing every second. Knowledge does not depend on the educational system rather it has moved beyond the formal literacy gests. Reading a novel has always been an awful experience that provides a break from monotonous life and offers colorful reaches for interpretations. Reading can be done anytime, anywhere irrespective of your terrain. E-learning has challenged the traditional literacy system. There's a critical need for an amalgamated literacy program to give reading a whole new brilliant experience. E-learning has proved to be cost-effective that meets our literacy needs. E-learning is a dynamic process, and the youth especially are more inclined to it. People's station change with time is true for-learning had played a major to give reading a breath-taking experience. It could be called a new surge for an intellectual movement.

Keywords

Classroom Learning, Updated technology, e-learning, intellectual movement

CUSTOMER SATISFACTION ON ZOMATO: A COMPREHENSIVE ANALYSIS

Sancheet Walekar[1], Lavina Jadhav[2],
[1]MET-Institute of Computer Science, Maharashtra, India
E-mail: sancheetwalekar@gmail.com
[2]MET-Institute of Computer Science, Maharashtra, India
E-mail: lavinaj_ics@met.edu

Abstract

This research paper aims to investigate the level of customer satisfaction on the popular food delivery platform, Zomato. In recent years, Zomato has emerged as one of the leading online food delivery services, revolutionizing the way people order food. Understanding customer satisfaction is crucial for the success of any service-based business, and Zomato's success heavily relies on meeting and exceeding customer expectations. This study employs a mixed-methods approach, combining quantitative data analysis and qualitative insights from customer reviews and surveys to explore the factors influencing customer satisfaction on Zomato. The findings will provide valuable insights for Zomato and other similar platforms to enhance their service quality and improve customer satisfaction.

Keywords

Customer satisfaction, Zomato, Online food delivery, Customer reviews.

ANALYSIS FOR PREDICTING THE LIKELIHOOD OF DIABETES IN PATIENTS USING DIFFERENT ML CLASSIFIERS

Sunny Yadav [1], Lavina Jhadhav[2]
[1] MET Institute of Computer Science, Maharashtra, India
E-mail: sunnyyadav200012@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-mail: lavinaj_ics@met.edu

Abstract

Diabetes is a chronic metabolic disorder affecting millions of individuals worldwide. Early diagnosis and effective management of diabetes are crucial for preventing complications and improving patient outcomes. This research paper aims to explore the Diabetes Prediction Dataset from Kaggle and develop a predictive model for diabetes diagnosis using machine learning algorithms. The dataset contains various clinical and demographic features of patients, such as glucose level, blood pressure, body mass index (BMI), and age. Through data preprocessing, feature engineering, and model training, this study aims to identify key risk factors and develop an accurate predictive model for early diabetes detection.

Keywords

Likelihood**,** Support Vector Machines (SVM), Light Gradient Boosting Machine (LGBM)

A REGRESSION ANALYSIS FOR PREDICTING LAPTOP PRICES

Gayatri Subhash Zalte[1], Lavina Jadhav[2]
[1*]MET Institute of Computer Science, Maharashtra, India
E-Mail: gayatrizalte8@gmail.com
[2] MET Institute of Computer Science, Maharashtra, India
E-Mail: lavinaj_ics@met.edu

Abstract

This study focuses on predicting laptop costs using regression analysis. It makes use of a large dataset with characteristics like brand, CPU kind, RAM, storage capacity, and other details. The dataset, which comes from Kaggle, offers insightful information on the variables affecting laptop prices. This study paper's goals are to assess the regression analysis's accuracy in predicting laptop prices, pinpoint the features that have the most bearing on costs, and investigate how machine learning techniques could increase forecast precision. The research technique uses Python modules including "numpy," "pandas," "matplotlib," and "Seaborn" for data preparation, feature selection, and model creation. The experimental results show the reliability of the regression models and shed light on the association between laptop price and features. The goal of this research is to help producers develop aggressive pricing strategies and customers make informed purchasing decisions. Additionally, it has broader ramifications for machine learning and regression analysis applications that estimate product prices based on feature sets. This research helps both customers and manufacturers by improving their understanding of the elements that influence pricing decisions by providing insightful information on laptop price prediction. Additionally, it advances regression analysis and its use in machine learning approaches for product price prediction.

Keywords

Laptop price prediction, Regression analysis, Features, Machine learning algorithms, Factors influencing prices

HOME AUTOMATION USING IOT

Sahil hodekar[1], Deepali Tardekar[2], Kirti Muley[3]
[1, 2, 3]Bharati Vidyapeeth's Institute of Management and Information Technology Navi Mumbai, India
E-mail: hsahil346@gmail.com
E-mail: deepalitardekar@gmail.com
E-mail: kirti13@gmail.com

Abstract

The home Automation industry is growing rapidly, this is fulfilled by the need to provide support systems for the elderly and the disabled, especially those who live alone. Coupled with this, the world population is confirmed to be getting older. Home automation systems must comply with household standards and convenience of usage. Home automation is one of the major growing industries that can change the way people live. The main objective of this paper is to develop a home automation system using a Node MCU ESP8266 board with Wi-Fi being remotely controlled by any Android OS smart phone. As technology is advancing so, houses are also getting smarter. Modern houses are gradually shifting from conventional switches to a centralized control system, involving remote-controlled switches. Presently, conventional wall switches located in different parts of the house make it difficult for the user to go near them to operate. Even it becomes more difficult for the elderly or physically handicapped people. Remote controlled home automation system provides a most modern solution with smart phones. In order to achieve this, a Wi-Fi module is interfaced to the Node MCU ESP8266 board at the receiver end while on the transmitted end, a GUI application on the cell phone sends ON/OFF commands to the receiver Light Emitted Diode (LED) where loads are connected. By touching the specified location on the GUI, the loads can be turned ON/OFF LED remotely through this technology.

Keywords

Home Automation System, Internet of Things (IoT), Cloud networking, Wi-Fi network, Mobile data.

MULTI FEATURE SKETCH-BASED IMAGE RETRIEVAL USING DEEP LEARNING APPROACH

Vishwanath. S. Mahalle[1], Narendra M. Kandoi[2]
[1,2]Computer Science and Engineering Department,
Shri Sant Gajanan Maharaj College of Engineering, Shegaon.
Shegaon(M.S.), India.
E-mail: vsmahalle@gmail.com
E-mail: kandoin2011@gmail.com

Abstract

Sketch based image recovery is an assignment that has been investigated a great deal as of late as an elective technique for picture recovery. The paper proposes a sketch based picture recovery framework which permits clients to select a sketch and the framework at that point finds relating comparative picture from the informational index. The primary preferred position of sketch based picture recovery rather than content based recovery isthat it is simpler to communicate the direction and posture in the question sketch to locate the necessary picture instead of determining these attributes in content. Based on the process of sketch based image retrieval SBIR especiallyfrom an accuracy point of view, we develop the customized model preparing the dataset. In addition, the client history criticism with the present hand- drawn picture is joined as the contribution of the exchange learning model, to calibrate thedissemination of highlights in vector space, so the neural system can get familiar with the customized semantic data.

Keywords

Deep Learning, Sketch Based Image Retrieval, CNN

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Prof. Chetna Achar (9324489786) | event_ics@met.edu | www.met.edu