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3.3.2 Number of books and chapters in edited volumes/ books published and papers in national / international conference proceedings during the 2021

Sr. no	Year	Title of book, book chapter, paper	Name Of Teacher	Title of the publisher, conference proceedings/ journal	Page
1	2021	System Programming and Operating Systems	Mrs. M. P. Navale	Nirali Prakashan	14
2	2021	Principles of Programming Languages	Ms. P. P. Jorvekar, Mr. S. N. Bhosale	Nirali Prakashan	15
3	2021	Semantic Internet of Things (IoT) Interoperability Using Software Defined Network (SDN) and Network Function Virtualization (NFV)	Mr. S. P. Bendale	Part of the Studies in Computational Intelligence book series (SCI,volume 941)	16
4	2021	Role Based Security in Borderless Network Using I-AM	Mr. Dinesh Bartakke, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	17
5	2021	A Systematic Analysis of Blockchain Technology and Cryptocurrencies	Mr. Vijay Ingawale, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	18
6	2021	Smart Card	Mr. Vishal Gadiya, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	19
7	2021	Advanced Intelligent Video Surveillance System	Mr. Shrikant Virkar, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	20
8	2021	Framework Object Tracking for Robotic Manipulator	Mr. Abhishek Mohite, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	21

9	2021	5G Technology and Software Defined Network (SDN)	Mr. Unmesh Jathar, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	22
10	2021	Cloud Security Using Machine Learning	Ms. Divya Chhaprwal, Mr. Mohan Yelpale	National Conference on Cognitive Computing (NCCC-2021)	23
11	2021	In Link-State Routing Networks, A Hybrid Link Protection Scheme Is Used to Ensure network Service Availability	Ms. Akansha More, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	24
12	2021	Classifying Houses Suitable for Electric Vehicle Charging Point Using Neural Network	Mr. Akash Maurya, Ms. Nandini Babbar	National Conference on Cognitive Computing (NCCC-2021)	25
13	2021	A Review on Enterprise Data Lake Solutions	Mr. Aakash Aundhkar, Ms. Shweta Guja	National Conference on Cognitive Computing (NCCC-2021)	26
14	2021	Image-Based Recommendation System Using JPEG-Coefficient and RFS Approach	Ms. AnshuliKumari, Ms. Nandini Babbar	National Conference on Cognitive Computing (NCCC-2021)	27
15	2021	Predicting Air Pollutant Using Data Mining and Machine Learning algorithm	Ms. Isha Jagtap, Ms. Nandini Babbar	National Conference on Cognitive Computing (NCCC-2021)	28
16	2021	An Experimental Assessment of Deep Learning on Highway Driving	Mr. Akash Rane, Dr. Shwetambari A. Chiwhane	National Conference on Cognitive Computing (NCCC-2021)	29
17	2021	A Detailed Comp arative Study of Predicting Student'sPerformance by Use of Different Data Mining Techniques	Ms. Nandini Babbar, Ms. Shrvya Mapari	National Conference on Cognitive Computing (NCCC-2021)	30

18	2021	Co-Existence of Artificial Intelligence and Blockchain	Mr. Akshay Varma, Ms. Devyani Sharma, Ms. Nandini Babbar	National Conference on Cognitive Computing (NCCC-2021)	31
19	2021	Forest Monitoring Using Remote Sensing	Mr. Aniket Bhore, Ms. Kavita Kumavat	National Conference on Cognitive Computing (NCCC-2021)	32
20	2021	Privacy Violation Patterns in Non-Relational Databases	Mr. Shubham Dawkhar, Dr. Shwetambari Chiwhane	National Conference on Cognitive Computing (NCCC-2021)	33
21	2021	Future Of 5G Wireless System	Ms. Apurva Chaturvedi, Dr. Amol V Dhumane	National Conference on Cognitive Computing (NCCC-2021)	34
22	2021	Smart Waste Management for Smart City Using IoT	Ms. Pratiksha Bansode, Ms. Varsha Rasal	National Conference on Cognitive Computing (NCCC-2021)	35
23	2021	Smart Sensors	Ms. Gayatri Vazarde, Ms. Surabhi Narkhede	National Conference on Cognitive Computing (NCCC-2021)	36
24	2021	Surface Gestures as extension Usage Scenario of Smart Watch	Mr. Omkar Sisodia	National Conference on Cognitive Computing (NCCC-2021)	37
25	2021	Touch Less Temperature Monitoring and Hand Sanitizer With GSM	Mr. Shaunak Neurgaonkar, Mr. Nikunj Mulkalwar, Mr. Aniket Pundge, Mr. J. A. Desai	National Conference on Cognitive Computing (NCCC-2021)	38
26	2021	Abstractive Summarization System Using Machine Learning	Ms. Supriya Ransing, Mr. Yogesh Khanse, Ms. Vaishnavi Kaydar, Ms. Sonal Banberu	National Conference on Cognitive Computing (NCCC-2021)	39
27	2021	Covid Symptoms Detection + Mask Detection	Ms. Snehal Batule, Ms. Shrushti Dongare, Mr. Vedant Kulkarni, Mr. Akshay Davkare	National Conference on Cognitive Computing (NCCC-2021)	40

28	2021	Covid-19 Prediction Using Convolutional Neural Network	Mr. Wasudeo Rahane, Mr. Shantanu S. Badve, Mr. Abhishek S. Bangale, Mr. Dhanraj M. Tapase, Mr. Saurabh J. Kolhale	National Conference on Cognitive Computing (NCCC-2021)	41
29	2021	Pain Detection Using Face Expression	Mr. Jayant Rathore, Mr. Wasudeo Rahane, Ms. Neha Yejgar, Ms.Aishwarya Lagad, Mr. Ninad Lakkad	National Conference on Cognitive Computing (NCCC-2021)	42
30	2021	An Online Portal for Home Based Services	Mr. Ammar Ali Habib, Mr. Rajkumar V Patil, Ms. Shraddha Shelke, Ms. Shweta Rajput, Mr.Taha Habib	National Conference on Cognitive Computing (NCCC-2021)	43
31	2021	Sentiment Analysis Using Machine Learning the Sorting Hat	Mr. Prasad Wagh, Mr. Pratik Jaiswal, Mr. Ankit Rahangdale, Ms. Sherlin Titus	National Conference on Cognitive Computing (NCCC-2021)	44
32	2021	Tweet Application Using Blockchain	Mr. Aayush Mahant, Mr. Kiran Sawane, Mr. Ashutosh Shinde, Ms.Pranali Sutar	National Conference on Cognitive Computing (NCCC-2021)	45
33	2021	Passenger Safety Using Drowsiness Detection and Monitoring System	Mr. Pritam Deshmukh, Mr. Abhishek Kumar, Mr. Shrikrushna Kedar, Ms. Shweta Shinde	National Conference on Cognitive Computing (NCCC-2021)	46
34	2021	Role Of Digitization in Indian Economy	Mr. Jay Dattoo Dhale, Mr. Vaibhav Baban Aghav, Mr. Devesh I. Sarda, Mr. Pramod G. Ghodke, Mr. Piyush P. Gawali	National Conference on Cognitive Computing (NCCC-2021)	47
35	2021	Stock Market Prediction Using Machine Learning	Ms. Shraddha Phuke, Mr. Piyush Gawali, Ms. Ekta Burman	National Conference on Cognitive Computing (NCCC-2021)	48
36	2021	Depression Detection on Social Media Data Using Naive Bayes, CNN and Flask	Mr. Wasudeo Rahane, Mr. Amit Bawankar, Mr. Abhijeet Mate, Mr. Harshad Palve, Mr. Mohan Khawale	National Conference on Cognitive Computing (NCCC-2021)	49

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38	2021	Digital Platform for Farmers to Detect Leaf Disease, OnlineMarketing& Weather Forecasting	Mr. Ajit Shitole, Mr. Kiran Mahalle, Ms. Snehal Surwase, Mr. Akshay Naik, Mr. T.R. Patil	National Conference on Cognitive Computing (NCCC-2021)	51
39	2021	Smart Shopping Application Using Android Studio and Unity	Mr. Sanjeev Gautam, Mr. Piyush Gawali, Mr. Anish Gulati, Mr. Manjeet Khanna, Mr. Tushan Belawat	National Conference on Cognitive Computing (NCCC-2021)	52
40	2021	Facial Recognition Attendance System	Mr. Ayush Chirde, Ms. Payal Kamthe, Ms. Aishwarya Somvanshi, Ms. Saloni Tikait, Mr. T. R. Patil	National Conference on Cognitive Computing (NCCC-2021)	53
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42	2021	Fractal MIMO Antenna For 5g WLAN and WIMAX Application	Mr. Kantilal Kharat, Ms. Shweta Chaudhari, Mr. Bhushan Khadke, Ms. Pooja Jomiwale	National Conference on Cognitive Computing (NCCC-2021)	55
43	2021	Memory Aid Device for Alzheimer Patients	Mr. S. D. Sawant, Mr. Shivraj Gawande, Ms. Sakshi Thorat, Ms. Shradha Gundawar	National Conference on Cognitive Computing (NCCC-2021)	56
44	2021	Design And Development of Lora WAN Protocol at Node	Mr. Sohail Jamadar, Ms. Amisha Bhatia, Ms. Riya Agrawal, Mr. S. M. Jog	National Conference on Cognitive Computing (NCCC-2021)	57
45	2021	Wireless Digital Stethoscope	Mr. Varun Rathor, Mr. Charanjit Dhiman, Mr. Aman Shinde	National Conference on Cognitive Computing (NCCC-2021)	58

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59	2021	IoT Based Smart Vehicle System	Mr. R. K. Nanwatkar, Mr. Rakesh Wani, Mr. Harish Mali, Mr. Sidhharth Sahasrabudhe, Mr. Prasad Bhargude	National Conference on Cognitive Computing (NCCC-2021)	72
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64	2021	Analyze And Rectify Spring back of The Frame Bonnet FrontAutomobile Part Using Simulation Tools	Mr. Shashikant Gavali, Mr. R.R. Kulkarni	National Conference on Cognitive Computing (NCCC-2021)	77

65	2021	Automatic Exterior Wall Painting Machine	Mr. Goutam V. Pise1, Mr. Kunal G. Wankhade2, Mr. Pranav S. Chatane3, Mr. Harsh S. Chintamani4, Mr. Sahadev S. Musale5	National Conference on Cognitive Computing (NCCC-2021)	78
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77	2021	Analysis And Optimization of Hybrid Energy Storage System for Electric Vehicle	Mr. Ravikant K. Nanwatkar, Dr. Deepak S. Watvisave	National Conference on Cognitive Computing (NCCC-2021)	90
78	2021	Automatic Anti-Reverse Braking System for Heavy Transport Vehicles	Mr. P.D. Gharge, Mr. Rahul L. Jathar, Mr. Suraj M. Ghadge, Mr. Sagar L. Sahane, Mr. Abhishek S. Labade	National Conference on Cognitive Computing (NCCC-2021)	91
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80	2021	One Wheeled Self Balancing Bike	Mr. A. R. Kare, Mr. Dhanraj Nimbolkar, Mr. Vishal Patil, Mr. Prasad Vyavahare, Mr. Anirudha Lanjewar	National Conference on Cognitive Computing (NCCC-2021)	93
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93	2021	Underground Cable Fault Detection Using GSM	Ms.Ishwari Sonar, Ms.Anisa Shaikh, Ms.Shivani Pote, Mr. A. O. Gokhle	National Conference on Cognitive Computing (NCCC-2021)	106
94	2021	Change Detection and Extraction of Information in Remote Sensing Images	Mr .SumitPawar, Mr .Rohan Sapkal, Mr .Saurabh Pawar, Mr .Roshan Pawar, Ms. MilyLal	National Conference on Cognitive Computing (NCCC-2021)	107
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114	2021	A Study of Financial Operations with Reference to Selected Automobile Sector in Pune City	Mrs. Jyoti Vipul Howale-Shinde, Mr. Sariputra Dipak Kalpande	National Conference on Cognitive Computing (NCCC-2021)	127

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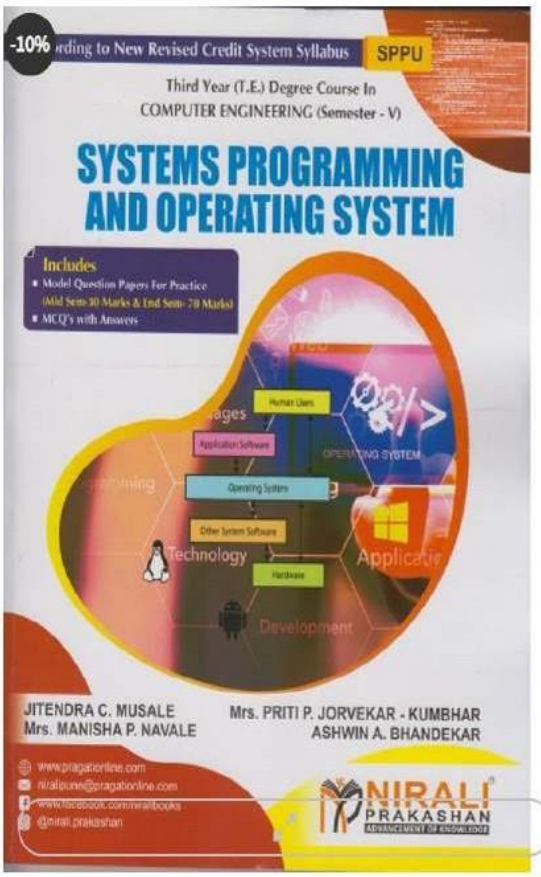

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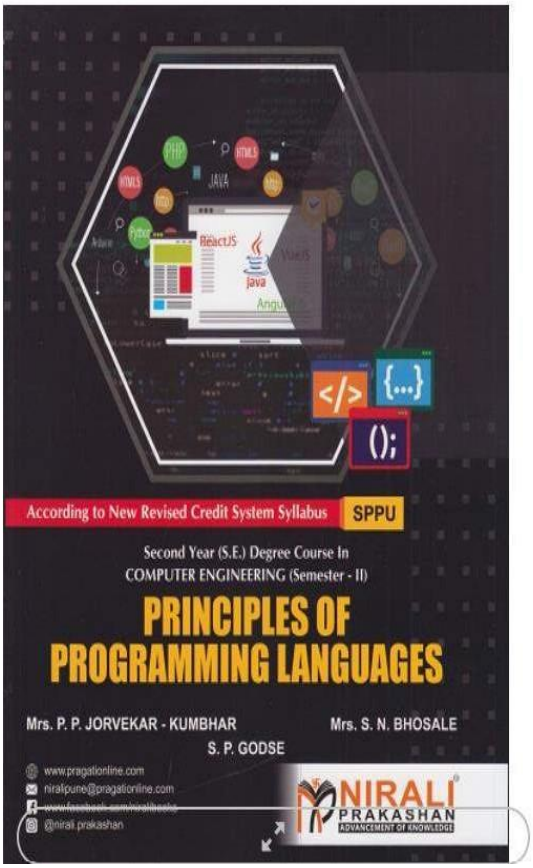

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Semantic Internet of Things (IoT) Interoperability Using Software Defined Network (SDN) and Network Function Virtualization (NFV)

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Abstract

In the coming few years, there is going to be rapid advancement in terms of technology like 5G, 6G, etc. When we think about 5G, the performance of the internet is going to increase multifold. The 5G i.e. fifth-generation network is going to be very heterogeneous. There is a need for a standardized solution to the issues in this technology. In this work, we are trying to understand the problems specifically in IoT (Internet of Things) area of 5G. In the literature survey, we found out that various solutions have been proposed in the area of the Internet of Things, but there is a lack of some generic solutions for all IoT projects. Every project works excellent in its closed and specified environment. When we try to connect multiple IoT projects, there is a big problem of interoperability. Some ICT standardization organizations have proposed some solutions to interoperability to overcome this scenario. Few solutions have been proposed by some authors to provide interoperability using semantic technologies. The solution for this problem of heterogeneous IoT can be provided using the semantic

4.Role Based Security in Borderless Network Using I-AM by Dinesh Bartakke, Kavita Kumavat

Role Based Security in Borderless Network Using I-AM

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In Today's world the security is needed in all fields like banking, networking, and organization for providing security at each level in particular sector where manually not possible. But the condition is due to larger dataset role in particular system getting divided in those who belong to that organization. Access is required to perform their duties, but excess access is threat to the organization that's why role-based access control is required to implement in organization network to perform smoothly operations. Role Based Security Access Control (RBAC) is an approach to cramped system access to system users. RBAC is assigning permissions for individual user based on their role in system. In larger organizations every employee does not required access to all resources. Organization uses remote applications to distribute over a borderless network facing many issues like monitoring, operation challenges. So, RBAC introduced to overcome issues for access privilege. To check user accessing and modifying the network, how user access it and from where they are accessing it, and then apply security to control that level of access. In borderless network collaboration of data takes place means that each system entity not having access for handling sensitive information get access to the same. This paper contains limitation of access management in borderless network environment at real time access control and policies.

5.A Systematic Analysis of Blockchain Technology and Cryptocurrencies by Vijay Ingawale, Prof. KavitaKumavat

A Systematic Analysis of Blockchain Technology and Cryptocurrencies

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Now a day's everyone doing lots of online transactions in day-to-day life, the online transaction involves digital money and that is becoming bit of challenge these days with rising threats, the hackers are stealing the bank account's detail's that is posted online and to overcome these problem's various kinds of crypto currency is the invention and the Bitcoin is one of them. The Blockchain Technology is used behind the Bitcoin crypto currency. In this work analysis discussed about blockchain technology and crypto currency. History behind the blockchain technology and crypto currency. Blockchain basic and working of blockchain technology and crypto currency works, benefits of blockchain and it will change the future of internet and life of us.

6. Smart Card by Vishal Gadiya, KavitaKumavat

Smart Card

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This paper analyses the security of the smart card application system and defines the objects in the system and trust relations between them to presents a whole secure scheme which can be used to realize the reliability and security of the authentication, database check and network communication in the smart card application system.

7.Advanced Intelligent Video Surveillance System by ShrikantVirkar, KavitaKumavat

Advanced Intelligent Video Surveillance System

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Now the day, Security is most important issue in the world. Infrastructure growths have been noticed in security related issues in the world. So, the demand is increase for security problems, intelligent video surveillance System is important area to research. This system basically censored system the performance, changing the information usually the term of human being, grounds, vehicles and many more objects of the world use some electrical equipment like Digital Camera. The scopes like preventing and detecting the led to the developing real-time objects and consistent intelligent video surveillance system is capable to video processing. The purpose of this study was to analyse the current status of video surveillance system technology combined with intelligent technology and to classify the research area dealing with video surveillance system. Proposed work also designed advanced intelligent video surveillance system used to observation to indoor and outdoor observation system. This system is design for protection purpose and survival of the individual. Intelligent video surveillance system is protected and detect the activities are available in this surveillance. The Advanced Intelligent Video Surveillance System (AIVSS) to designed more security reliable to the real-time alert and support video analysis for forensic investigation. System is deals with various requirements for the designing and reliable intelligent video surveillance system. In this surveillance system such type of different cameras and different environmental conditions like indoor and outdoor surveillance is required. This system required different modelling scheme for designing of efficient intelligent surveillance system under the different conditions.

8. Framework Object Tracking for Robotic Manipulator by AbhishekMohite , KavitaKumavat

Framework Object Tracking for Robotic Manipulator

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For the purpose of successfully completion of humanly unmanageable, Hazardous tasks, Repetitive tasks Industrial Robots are widely used. So, on some modern improvements, technology update in the efficiency, errorless work, increasing production, and cost friendly work of industrial robot manipulators is of prime concern. This can be done through path planning and machine vision techniques with a focus on shortest path calculation and localization. However currently reconstruction techniques mainly target large – scale scenes, such as an indoor environment or automatic self-driving cars and in bottle filling industries which extensively use robotic manipulators to place bottles during production and post placements. Further have simplified 1-D, 2-D, and problems using anon-rectified stereo camera model and object tracking by applying the triangulation method in 3D stereo vision coordinate system for tracking the object centre by using an RGB mark placed on the object surface. Therefore, an attempt is made to combine colour area tracking with machine learning to achieve better accuracy and more finite work.

5G Technology and Software Defined Network (SDN)

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With the continuous development of 5G network (5thgeneration mobile networks) communication technology, and uses of the Internet of Things (IoT) and other intelligent automation applications. Devices are produced a big amount of data, for this fifth-generation (5G) mobile network introduced to support this type of development. 5G mobile network can provide many features and advantages in cellular phones. But 5Gnetwork technology faces many challenges. One of its challenges is managing a large number of devices running a different type of services, Software Defined Network (SDN) is proposed as a key technology for the 5G network to overcome this drawback. Software-Defined Network (SDN) architecture provides energy efficiency, higher flexibility, cost-effectiveness, and scalability in5G mobile networks. Software-defined networking (SDL) is one of the most discussed topics these days. This technology is being considered one of the technologies for data plane and isolation of control plane and logical placement of centralized control from SDN controller. There are different architectures for the SDN control plane. Study of these architectures, and also pacify the usage of Logically Centralized-Physically Distributed (LC-PD) controller management and architecture in 5Gnetworks. This type of architecture providing lower latency, and higher throughput compared to other control plane architectures.

Focus was on the demonstration that the LC-P control plane architecture improves communication efficiency and the Quality of Services (QoS) of running internet services in the 5G mobile network.

10.Cloud Security Using Machine Learning by DivyaChhaprwal, Prof. Mohan Yelpale

Cloud Security using Machine Learning

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Cloud computing is quickly gaining in popularity and utilisation. Several businesses are investing in this subject, either for their own benefit or as a service to others. The creation of numerous security risks for both industry and consumers is one of the consequences of Cloud development. Machine Learning is one of the methods for securing the cloud (ML). On the Cloud, machine learning techniques have been employed in a variety of ways to avoid or identify attacks and security flaws. In proposed work conducted a Systematic Literature Review (SLR) of ML and Cloud security methodology and strategies in this study. The results of the SLR were divided into three key study categories after reviewing 63 relevant studies: the many forms of Cloud security threats, the machine learning approaches employed, and the performance results. Eleven cloud security areas have been identified. Furthermore, with 16 percent and 14 percent usage, distributed denial-of-service (DDoS) and data privacy are the most frequent Cloud security topics. On the other hand, discovered 30 ML approaches, some of which were hybrid and others which were stand-alone. SVM is the most widely used machine learning algorithm in both hybrid and standalone models. In addition, 60% of the publications compared their models against other models in order to demonstrate the efficacy of their proposed model. In addition, 13 alternative evaluation indicators were listed. True positive rate is the most widely used statistic, whereas training time is the least widely utilised. Finally, KDD and KDD CUP'99 are the most widely utilised datasets among relevant studies, out of a total of 20.

11.In Link-State Routing Networks, A Hybrid Link Protection Scheme Is Used to Ensure network Service Availability by AkanshaMore ,KavitaKumavat

In Link-State Routing Networks, a Hybrid Link Protection Scheme is used to EnsureNetwork Service Availability

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Hybrid link u protection (HLP) used to offer failure robust routing with loop-free criterion (LFC) without incurring considerable additional costs. HLP more effectively ensures high network availability. There are two stages to implementing HLP. The first stage gives an effective LFC-based approach (MNP-e). Stage two uses MNP-eto provide backup path protection (BPP), where only a small number of links must be protected utilizing unique pathways and packet headers in order to achieve the network availability requirement. The internet is becoming increasingly important in both personal and professional activity. Furthermore, with the advent of real-time, delay-sensitive, and mission critical applications, internet service providers must meet high network availability requirements (ISPs). Many ISPs have used the loop-freecriterion (LFC) technique to deal with single network component failure scenarios in big internet backbones. LFC's success is due to its intrinsic simplicity, yet this comes at the cost of leaving some failure scenarios unprotected. Proposed work present a novel link protection system, hybrid link protection (HLP), to offer failure robust routing with LFC without incurring considerable additional costs. HLP ensures high network availability in a more efficient manner than prior methods. HLP not only takes around 10% of the time that full protection takes, but it also gives all of the full protective capabilities that full protection does.

12.Classifying Houses Suitable for Electric Vehicle Charging Point Using Neural Network by AkashMaurya, Prof. NandiniBabbar

Classifying Houses suitable for Electric Vehicle Charging Point using Neural Network

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As Electric Vehicles (EV) emerge as the leading green transport in the UK and other countries, it is important that to understand the available infrastructure to support this adoption cars. In this multi-disciplinary work shows the end-to-end work flow using the deep learning to do automated urban research to identify suitable habitats Charging EV. A unique database containing open-source images for Google Street View images has been used train and compares three deep neural networks and represents the first attempt to differentiate habitats driveways from street images. Proposed work show full-service delivery in two urban areas and achieved 87.2% data and 89.3% respectively. This proof of concept shows the file for a promising new application for in-depth learning in the field of remote sensing, global analysis, and city planning, and a major step towards exploring intelligent self-reliance built-in strategies.

13.A Review on Enterprise Data Lake Solutions by AakashAundhkar, ShwetaGuja

A Review on Enterprise Data Lake Solutions

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Data Lake is a highly flexible storage solution that can store both structured and unstructured data and operates on the schema-on-read approach. It acts as a potential alternative to the current Big Data storage issue. However, it does have certain flaws, such as inadequate authentication and access control. This paper examines a few of the current business Data Lake strategies. Apache Hadoop is generally regarded as the data lake industry standard. Its parallel processing systems ensure high-speed processing of massive volumes of data. Many businesses have attempted to build Hadoop wrappers in order to resolve questions about its raw state and lack of data protection. Platforms including Amazon Web Services (AWS) Data Lake and Azure Data Lake fall under this category. AWS Data Lake provides a more straightforward approach with failsafe to avoid data failure, while Azure Data Lake offers much greater scalability and enterprise-level reliability. Data Lake systems are becoming increasingly common in a variety of sectors, including finance, business intelligence, engineering, and healthcare.

14.Image-Based Recommendation System Using JPEG-Coefficient and RFS Approach by AnshuliKumari, Prof. NandiniBabbar

Image-Based Recommendation System using JPEG- Coefficient and RFs Approach

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Online shopping platforms are expanding at an unstoppable rate all over the world. These platforms mostly depend on search engines, which are still primarily based on the text-base and use keywords matching for finding similar products. However, customers want an interactive platform that would be easy, convenient and reliable for searching related products. In this paper, proposed a novel idea of searching for products in an online shopping system using an image-based approach. In this, a user can provide, select, or click an image, and similar image-based products will be presented to the user. The proposed recommendation system is based on content-based image retrieval and is composed of two major phases; Phase 1 and Phase 2. In Phase 1, the proposed way would find the class/type of the product. In Phase 2, the recommendation system retrieves closely matched similar products. For Phase 1, the approach creates a model of products using Machine Learning (ML). The model is then used to find the category of the test products. From the ML perspectives, this work has used the Random Forests (RF) classifier, and for feature extraction, used the JPEG coefficients. The dataset used here includes 20 categories of products. In Phase 1, the evaluation of the proposed model generates a 75% accurate model. For further enhancement for performance, the RF model has been integrated into the Deep Learning (DL) setup achieving 84% accurate predictions. Based on the customized evaluation approach for Phase 2, the proposed recommendation approach achieves 98% correct results, thus demonstrating its efficacy and accuracy for the product recommendation and searching in the daily life routine and practical applications.

15.Predicting Air Pollutant Using Data Mining and Machine Learning algorithm by IshaJagtap, Prof. NandiniBabbar

Predicting Air Pollutant using Data Mining and Machine Learning Algorithms

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Air pollution can be defined presence of harmful or hazardous substances in the air which deteriorate the quality of air. As this are moving ahead in future the environment is getting polluted day by day due to these biological molecules and harmful gases. These pollutant causes disease, allergy and death as well. The main focus of this paper is to study Data Mining and Machine Learning Algorithms to predict the air pollutant in the air particularly PM2.5. So as to control the emission of these harmful substances This is a scientific approach to predict PM2.5 level and detect air quality based on a data set consisting of daily atmospheric conditions in a specific city.

16.An Experimental Assessment of Deep Learning on Highway Driving by AkashRane, Dr. Shwetambari A. Chiwhane

An Employee Satisfaction al Assessment of Deep Learning on Highway Driving

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Many groups have used different types of deep learning techniques on computer vision in highway driving scenes. In this paper explained the experimental assessment of deep learning. Computer Vision with deep learning can bring a reasonable and robust, powerful solution to the sector of autonomous driving. To prepare the deep learning for practical applications the neural networks require the data sets to train for all types of scenarios of driving. In system need to collect the Data sets and train the model with deep learning and computer vision algorithms for recognition of cars and lanes.

17.A Detailed Comp arative Study of Predicting Student'sPerformance by Use of Different Data Mining Techniques by Prof. NandiniBabbar ,ShrvyaMapari

A Detailed Comparative Study of Predicting Student's Performance by use of different Data Mining Techniques

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To make one country stand distinctive among the other nations of the world, the education system has to undertake a major change by remodelling its structure so as to attain the best results and reduce the failure rate. Lately there has been a growing interest within the data processing area, where the objective is to discover the knowledge that is correct and of high benefits to the clients. Educational Data Mining (EDM) is a rising area which indicates the techniques, tools, and research designs applied to acquire information from educational records. In order to upgrade the prediction, process a deep study of literature and choice of the best prediction technique is very necessary. The main objective of this work is to present a detailed comparative study of different recently used data mining techniques, algorithms and the impact on the datasets as well as the prediction attribute's result in a more clear and precise way. The paper also recognizes the best attributes that will help in the prediction of student performance in an efficient way.

18. Co-Existence of Artificial Intelligence and Blockchain by AkshayVarma, Devyani Sharma, Prof. NandiniBabbar

CO-EXISTENCE OF ARTIFICIAL INTELLIGENCEAND BLOCKCHAIN

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Artificial Intelligence (AI) and blockchain have become two of the most trending and disruptive technologies. Blockchain technology has the ability to automate payment in crypto currency and to provide access to a shared ledger of data, crypto currencies are getting loads of attention in the world. Lots of crypto currencies are created since 2011 with Bitcoin dominating the crypto currencies' market. The idea of Bitcoin was 1st introduced by number of unknown individuals (or a bunch of people) named Satoshi Nakamoto in 2009. Bitcoin is peer-to-peer cryptocurrency and a localized worldwide payment system for digital currency wherever transactions take place among users with none negotiator. With lots of crypto currencies being employed as monetary assets and with millions of trades being done through totally different exchange services. T Data is the input for numerous

Artificial intelligence (AI) algorithms to mine precious features, yet data in Internet is scattered anywhere and managed through distinct stakeholders who can't trust in each other, and utilization of the information in complicated cyberspace is tough to authorize or to validate. As a result, it's far very tough to permit information sharing in our on-line world for the actual large information, in addition to an actual effective AI. In addition, there are other challenges that are specific to the domain of crypto currencies such as mining, cyber security, anonymity and privacy. Element from this work the prevailing threats and weaknesses of the crypto currency machine and its most important technology inclusive of the blockchain protocol. Reviewed the literature, tabulate, and summarize the emerging blockchain applications, platforms, and protocols specifically targeting AI Area.

19. Forest Monitoring Using Remote Sensing by AniketBhore, KavitaKumavat

Forest Monitoring Using Remote Sensing

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Due to sudden climatic changes system facing natural disasters every now and then. Floods and Forest fire news are always hitting the headline of newspapers. Recently Brazil and Australia have been affected by Forest Fire. There is also increase in illegal activities such as Poaching, Deforestation etc. which lead to attack by animals in nearby areas. The Forest Rangers are not able to monitor the forest covers due to lack of accessories and resources. Therefore, decided to study various Forest Monitoring Systems. In this system, it will monitor the forest using various Remote Sensing techniques.

20. Privacy Violation Patterns in Non-Relational Databases by ShubhamDawkhar, Dr. ShwetambariChiwhane

Privacy Violation Patterns in Non-Relational Databases

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In 21st century data became the new oil. Every decision taken by organizations, governments, individuals is influenced by data. With analysis of data, one can predict market behaviour, can forecast weather. With such high value, it is important to manage and access data. Data has been growing exponentially since the late 1990s. There are many databases system used to store this data. Before the 2000's mainly relational databases were used to store. But managing relational databases is expensive and complicated. To expand the capacity of relational databases hardware and skilled employees are needed. in the 2000s NoSQL databases were introduced. NoSQL database is fast, reliable, efficient, supports low-cost hardware up-gradation, and can store unstructured data. NoSQL databases are one the most preferred options as of today. With great speed and efficiency NoSQL rapidly became popular and widely used. But to achieve this function security is highly compromised. With a lot of security and privacy flaws data became more vulnerable to privacy breaching. Many pieces of research have been done in the NoSQL domain to eliminate the flaws but all of them are scattered in this review work tried to synthesis the previous literature and compile all the repeating privacy violation patterns into one paper.

21. Future Of 5G Wireless System by ApurvaChaturvedi, Dr. Amol V Dhumane

Future of 5G Wireless System

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The purpose of this review paper is detailed study of5G technology and what can current work expect from this technology in future. Several research areas in 5G technology are going on, which will help us to create awareness of improvement in this technology, its potential applications and presumption, and the difficulties surrounding it. 5G Technology stands for 5thGeneration Technology. In this technology, highest priority is given to the mobile users in comparison with others. 5Gtechnology is to operate smart phones within very high bandwidth; it is designed having superior connectivity for other types of devices aside from smart phones. The 5G technology is an ultimate experience that the people have never experienced before. The 5G technology includes various types of advanced attributes which going to make it one of the ruling technologies in the coming years. This paper also presents an overview on the road to future of 5G technologies and what users can look forward to from it.

22. Smart Waste Management for Smart City Using IoT by Pratiksha Bansode, Prof. VarshaRasal

Smart Waste Management for Smart City using IOT

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As the population of the world is increasing day by day, the environment should be clean and hygienic for our daily life leads. Waste management is one of the primary problems that world faces irrespective of the case of developed or developing country. Due to lack of care and attention the garbage bins are mostly seem to be overflowing and starts producing an obnoxious smell in surrounding area. It has to be taken into care by corresponding authorities and should think what method can be followed to overcome this. This huge unmanaged accumulation of garbage is polluting the environment, spoiling the beauty of the area and also leading to the health hazard. To overcome this many garbage collection systems are getting developed based on IOT. Proposed work provides a survey of an Internet of Things (IOT) Garbage Monitoring and Waste Management System to diminish the flood of waste component and suitably keeping nature clean.

23. Smart Sensors by GayatriVazarde, SurabhiNarkhede

SMART SENSORS

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Internet of Things (IoT) applications whether for city infrastructures, factories, or wearable devices—use large arrays of sensors collecting data for transmission over the Internet to a central, cloud-based computing resource. Analytics software running on the cloud computers reduces the huge volumes of generated data into action able information for users, and commands to actuators back out in the field. Sensors are one key factor in IoT success, but these are not conventional types that simply convert physical variables in to electrical signals. They have needed to evolve into something more sophisticated to perform a technically and economically viable role within the IoT environment. This article reviews the IoT's expectations of its sensors. What must be done to achieve the large sensor array's characteristic of the IoT. Then it addresses how manufacturers have responded with improvements to fabrication, more integration, and built-in intelligence culminating in the concept of the smart sensors now in wide use. It will become evident that sensor intelligence, apart from facilitating IoT connectivity, also creates many more benefits related to predictive maintenance, more flexible manufacturing, and improved productivity. The availability and wide range of application of low-cost sensors have encouraged demand for improved sensor performance Integrated sensors are being developed to meet the designer's need for simpler systems Smart sensors are becoming integral parts of systems performing functions that previously could not be performed.

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24.Surface Gestures as extension Usage Scenario of Smart Watch by Omkar Sisodia

Surface Gestures as Extension usage Scenario Of Smart Watch

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Smart watch has become one of the extremely important electronic equipment now. However, usage pictures/situations of smart watch are still (compared to other things) limited. In this paper, this system proposes a new smart watch picture/situation called surface (hand/arm movement)/action by adding an infrared camera in strap position. Smart watch with surface hand-movement related function can use (hand/arm movement)/action to control itself, and also control other devices. In our hardware machine (that reproduces the real thing) (raised, flat supporting surface), surface (hand/arm movement)/action basically meets needed thing of extension usage pictures/situations.

25.Touch Less Temperature Monitoring and Hand Sanitizer With GSM by ShaunakNeurgaonkar, NikunjMulkalwar, AniketPundge,J.A. Desai

TOUCH LESS TEMPERATURE MONITORING AND HAND SANITIZER WITHGSM

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Demand for hand sanitizers has surged since the corona virus broke out and spread around the world. Hand sanitizers are usually applied by squirting the sanitizer liquid when one presses a pump with one's hand. This causes many people to come into contact with the pump handle, which increases the risk of viral transmission. Some hand sanitizers on the market are automatically pumped. However, because sanitizer containers and pump devices are designed to be compatible only between products produced by the same manufacturer, consumers must also repurchase the container for the liquid if they replace the hand sanitizer. Therefore, this paper suggests the design of an automatic hand sanitizer system compatible with various sanitizer containers.

26.Abstractive Summarization System Using Machine Learning by SupriyaRansing, YogeshKhanse, VaishnaviKaydar, SonalBanberu

Abstractive summarization system using Machine Learning

Supriya Ransing[1], Yogesh Khanse[2], Vaishnavi Kaydar[3], Sonal Banberu[4]

Micro blogging offerings have revolutionized the way human beings trade facts. Confronted with the ever-growing numbers of microblogs with multimedia contents and trending topics, it's far proper to offer visualized summarization to assist users to quickly hold close the essence of topics. While existing works normally attention on text-based strategies best, summarization of a couple of media sorts (e.g., text and image) are scarcely explored. In proposed approach multimedia microblog summarization framework to automatically generate visualized summaries for trending topics. Specifically, a novel generative probabilistic model, termed multimodal-LDA (MMLDA), is proposed to find subtopics from microblogs by means of exploring the correlations amongst different media kinds based on the records accomplished from MMLDA, a multimedia summarizer is designed to one-by-one pick out representative textual and visual samples and then form a complete visualized summary.

27.Covid Symptoms Detection + Mask Detection by SnehalBatule, ShrushtiDongare, VedantKulkarni, AkshayDavkare

COVID SYMPTOMS DETECTION + MASK DETECTION

Snehal Batule[1], Shrushti Dongare[2], Vedant Kulkarni[3], Akshay Davkare[4]

Head pose classification is widely used for the preprocessing before face recognition and multi-angle problems, because algorithms such as face recognition often require the input image to be a front face. But affected by the COVID-19 pandemic, people wear face masks to protect themselves safe, which makes cover most areas of the face. This makes some common algorithms cannot be applied to head pose classification in the new situation. Therefore, this project established a method HGL to deal with the head pose classification by adopting color texture analysis of images and line portrait. The proposed HGL method combines the H channel of the HSV color space with the face portrait and grayscale image, and train the CNN to extract features for classification and its hardware pulse sensor check the oxygen level of person and notify and also check Temperature by using temperature Sensors notify the level of Temperature low or not. The evaluation on MAFA dataset shows that compared with the algorithms based on facial landmark detection and convolution neural network, the proposed method has achieved a better performance.

28.Covid-19 Prediction Using Convolutional Neural Network by WasudeoRahane, Shantanu S. Badve, Abhishek S. Bangale, Dhanraj M. Tapase, Saurabh J. Kolhale

Covid-19 Prediction Using Convolutional Neural Network

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The currently available Reverse Transcription – Polymerase Chain Reaction (RT-PCR) method for the detection of COVID-19 fails due to restricted supply of test kits and relatively low positive symptoms in the early stages of the disease, necessitating the need for alternative solutions. The artificial intelligence-based tool could assist the world in developing an additional disease prevention policy. In this method, an automated detection system is proposed, which uses indications from Computer Tomography (CT) images to train the deep learning model CNN architecture. CNN is the best deep learning model option due to its promising accuracy for biomedical images and availability of fewer samples, which satisfies the need for CNN training. The presented paper aims to discuss the various aspects of the system, beginning with a brief summary and gradually progressing to explain the various implementations, which include the datasets used, the use of the State of the Art (SOTA), and a discussion of the various metrics used for evaluation. Finally, a user-interactive system is presented that employs the qualified model in the area.

29.Pain Detection Using Face Expression by JayantRathore, WasudeoRahane, NehaYejgar, AishwaryaLagad, NinadLakkad

Pain Detection Using Face Expression

Jayant Rathore[1], Wasudeo Rahane[2], Neha Yejgar[3], Aishwarya Lagad[4], Ninad Lakkad[5]

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The basic idea of this project is to build an interactive system among software that takes some mandatory inputs to recognize the symptoms and stress level of a person and hardware that talks about brain signals and pain intensity of that person. Affective computing research field is growing on large scale with the frequent development of human computer application. These application use information of mental or affective condition of the desired subject to train their brain responses. Usually, classification algorithm is used for text physiology, vocal, expression of face and other accumulation. Pain may be a personal, subjective experience that's commonly evaluated through visual analogue scales. Generally, it's appropriate and functional, machine-driven system of pain detection that can reduce pain score attainment efforts in large scale studies by estimating it directly from the participants' facial expressions. Face plays significant role in social communication. This is a 'window' to human personality, emotion and thoughts. Many times, body languages and particularly facial expressions, tell us quite about one's state of mind.

30.An Online Portal for Home Based Services by Ammar Ali Habib, Rajkumar V Patil, ShraddhaShelke, Shweta Rajput, TahaHabib

An Online Portal for Home Based Services

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This work is advancing to an era of technology; have to outsmart our regular day-to-day life activities by using technological advancement. One such technological advancement that can boost up our day-to-day service needs is the use of a website that can bring all the essential day-to-day services to our doorstep with just a click. In our normal life routine, everyone requires a lot of services for our household, workplace, offices, etc. However, finding all of these services in our contacts is very difficult. So, to solve this problem proposed a portal of services that can fulfill everyone's need for services. The portal will provide all kinds of services including plumbing, carpenter, electrical maintenance, laundry services, home salon services, Ro servicing, etc. The user can sign up for the website and then log in and access all the details of the services nearby their location. They can choose from a list of service providers with different ratings and reviews to find the most relevant service provider of their choice. The user can directly contact the service provider and get their services. The user will also get a unique id when they order a service from a service provider to make the process more secure for the user. It will also provide a feature for users to schedule their required services for a particular time of the day and the payment can be made both in cash well as online payment will be accepted. The users can also share their feedback about a particular service to let other users know about the service provider. This portal will not only benefit the user however it will also be beneficial for the service provider. As various service providers can register with the portal and get a more customer base with the help of this portal. The service provider will also have the option to put their status as available and not available throughout the day so when a particular service provider is on a break, they can change their status to not available and the customers will not be able to find them in the list. In this way, users can easily avail the needed home services without any difficulty or delay.

31.Sentiment Analysis Using Machine Learning the Sorting Hat by Prasad Wagh, PratikJaiswal, AnkitRahangdale, Sherlin Titus

Sentiment Analysis using Machine Learning the Sorting Hat

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Sarcasm and Hate Speech is impacting societal harmony and peace. Considering the magnitude of this harmonious impact, there is a need to find a solution to curb the online spread of Hate Speech and Sarcasm. Detection of hate speech and sarcasm is being tackled with various approaches like manual checks, deep learning techniques in recent times, and statistical-based classification algorithms. These methods are unreliable due to then on-binary (true or false) nature of the tweets. Categorizing tweets requires deeper investigation such as classification on entirely positive or entirely negative rather than binary classification. In this paper, a snippet, the Sorting Hat, to detect sarcasm, hate-speech, and sentiments in the tweets using SVM (Support Vector Machine) and LSTM (Long short-term memory) is proposed. The Sorting Hat classifies a given tweet into one of the six degrees of classification - "Positive", "Negative", "Neutral", "Sarcasm", "Non-sarcasm", "Hate-speech". The basic meaning of sarcasm which comes into our mind is a positive statement or sentiment attached to a negative situation or vice versa. The current system works only on the dataset which is constrained to a particular topic. The current systems also do not determine the measure of impact, the results determined can have on the particular field taken into consideration and it does not allow retrieval of data based on the query entered by the user i.e., it has constrained scope. Whereas the Sorting Hat will collect the tweets from the users manually. The collected tweets will be subjected to preprocessing. Will then apply the supervised algorithm on the stored data. The supervised algorithm used in our system is Support Vector Machine (SVM). The results of the algorithms i.e., the sentiment will be represented in graphical manner (bar charts). The proposed system is more effective compared to the existing one. This is because system will be able to know how the statistics determined from the representation of the result can have an impact in a particular field. The overall product experience using The Sorting Hat largely intervenes the impulsive behavior of posting tweets, and thereby provides the solution to curb rampant spread of Hate Speech and better understanding of sarcastic tweets.

32.Tweet Application Using Blockchain by AayushMahant, KiranSawane, AshutoshShinde, PranaliSutar

Tweet Application Using Blockchain

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Blockchain uses peer-to-peer networks, which makes sure no network failure can occur due to single point of failure. It serves as an immutable ledger which allows tweeting to take place in a decentralized manner. In today's world keeping data on a centralized server can lead to monopoly, risk and costlier maintenance, A decentralized application for communication and resource sharing is need of the era. With the help of various consensuses, can implement different ways to share resources and communicate. Together with Blockchain and Decentralized Applications, can create a secure and reliable tweet application that overcomes the drawbacks of traditional tweet applications.

33.Passenger Safety Using Drowsiness Detection and Monitoring System by PritamDeshmukh, Abhishek Kumar, Shrikrushnakedar, ShwetaShinde

Passenger Safety using Drowsiness Detection and Monitoring System

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To improve road safety, this study offers a drowsiness-fatigue-detection (DFD) system based on wearable smart glasses. A pair of wearable smart glasses, an in-vehicle infotainment (IVI) telematics platform, an OBD-II-based automobile diagnostic bridge, an active vehicle rear light alarm mechanism, and a cloud-based management platform make up the proposed system. A dedicated miniature band pass IR light sensor for low-cost, lightweight, wearable smart glasses is also proposed and implemented, which can provide a higher signal-to-noise ratio (SNR) than a general commercial infrared (IR) light sensor, minimize the ambient environmental light image, and efficiently increase detection accuracy. In real time, the suggested system may detect the status of the vehicle driver in terms of drowsiness or weariness. When tiredness or exhaustion is detected, the active vehicle's real light alert function will flicker to warn following vehicles. Concurrently, the related data will be delivered to a cloud-based management platform. As a result, the suggested technology has the potential to improve traffic safety.

34.Role Of Digitization in Indian Economy by Jay DattooDhale, VaibhavBabanAghav, Devesh I. Sarda, Pramod G. Ghodke, Prof. Piyush P. Gawali

ROLE OF DIGITIZATION IN INDIAN ECONOMY

Jay Dattoo Dhale[1], Vaibhav Baban Aghav[2], Devesh I. Sarda[3], Pramod G. Ghodke[4], Prof. Piyush P. Gawali[5]

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The world as everyone knows it is continually changing, and one of the fundamental drivers is digital transformation. At its core, digital transformation isn't about Internet "unicorns." It's about using the latest technology to do what you already do – but better. The global economy is undergoing a digital transformation as well, and it's happening at breakneck speed. So, what is the digital economy? It's the economic activity that results from billions of everyday online connections among people, businesses, devices, data, and processes. The backbone of the digital economy is hyper connectivity which means growing interconnectedness of people, organizations, and machines that results from the Internet, mobile technology and the internet of things (IoT) The digital economy is taking shape and undermining conventional notions about how businesses are structured; how firms interact; and how consumers obtain services, information, and goods. Blockchain is shared distributed ledger which stores business transaction to a permanent unbreakable chain which can be viewed by the parties in a transaction. Blockchain technology has the potential to disrupt the financial business applications as it provides permanent and tamper proof recording of transactions in a distributed network

35.Stock Market Prediction Using Machine Learning by ShraddhaPhuke, PiyushGawali, EktaBurman

Stock Market Prediction Using Machine Learning

Shraddha Phuke[1], Piyush Gawali[2], Ekta Burman[3]
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In Stock Market Prediction, the aim is to predict the future value of the financial stocks of a company. The recent trend in stock market prediction technologies is the use of machine learning which makes predictions based on the values of current stock market indices by training on their previous values. Machine learning itself employs different models to make prediction easier and authentic. Focus on the use of Regression and LSTM based Machine learning to predict stock values. Factors considered are open, close, low, high and volume.

36.Depression Detection on Social Media Data Using Naive Bayes, CNN and Flask by WasudeoRahane, AmitBawankar, Abhijeet Mate, HarshadPalve, Mohan Khawale

Depression Detection on Social Media Data Using Naive Bayes, CNN and Flask

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Suicide is one of the most serious social health issues that exists in today's culture. Suicidal ideation, also known as suicidal thoughts, refers to people's plans to commit suicide. It can be used as a suicide risk measure. India is among the top countries among in the world to have annual suicide rate. Social networks have been developed as a first-rate factor for its users to communicate with their interested buddies and proportion their captions, photos, and videos reflecting their moods, emotions and sentiments. To increase and put in force a version which takes a facial expression images as an enter and symptoms. On the basis of that it predicts the repute of that patient whether or not he/she has been detected or now not detected for depressed. Can train version using photographs & will use it for prediction. Image captioning can be accomplished after prediction for higher visualization of report. Also used the text mining (NLP) technique to predict melancholy the usage of signs furnished with the aid of person. At final system able to make final choice primarily based on above two techniques. To generate detailed dashboard of user disease status and to design webapp for above system. In proposed system using CNN algorithm for speed up detection of depressed character instances and approach to become aware of high-quality answers of mental health troubles. System learning method as an efficient and scalable technique. Also documented an implementation of the proposed method. In this work evaluated the efficiency of proposed technique the usage of a set of various psycholinguistic features. Proposed system shows that method can extensively improve the accuracy and category blunders price.

37. TG'JI Chatbot: Automation of Teacher Guardian System Using Machine Learning by AjinkyaDeshpande, PayalBhosale, SharadTawde, ManishaLawate

TG'JI Chatbot: Automation of Teacher Guardian System using Machine learning

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In recent times, the design and implementation of chatbots have received great attention from developers and researchers. Chatbots are Artificial Intelligence (AI) based conversational systems which are able to process human language through various techniques including Natural Language Processing (NLP) and Neural Network (NN). The proposed methodology is to develop a state-of-the-art chatbot application that can be used in colleges and institute as medium of communication between Teacher Guardian and parent of students. The proposed chatbot can be implemented using a couple of tools such as Dialog Flow, TensorFlow, Android Studio and Firebase, followed by Machine Learning (ML) techniques to provide information about ward to parents through use of Chatbot. The parent scan knows about attendance of their ward as well the performance at exams.

38. Digital Platform for Farmers to Detect Leaf Disease,OnlineMarketing& Weather Forecasting by AjitShitole, KiranMahalle, Akshay Naik, Prof. T.R. Patil

Digital platform for farmers to detect leaf disease, online marketing & Weather Forecasting

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The field of agriculture is during a great threat this includes the diseases that attack the plant leaf. This system finds the area of leaf that has been affected and also the disease that attacked the leaf. This is achieved by using Image Processing; there are systems that predict the diseases in the leaf. Our system uses Convolutional Neural Networks algorithm to produce more accuracy in the detection of disease in the leaf. The image is first pre-processed and then the FCN method is applied to find the affected area of the leaf. This is then processed Convolutional Feature Matrix through this measure the accuracy and find the disease. System also provides a platform to farmers to sell their products online through our application. Farmers can upload their product and sell to nearby customers. Our system also provides alerting system for rainfall and storms that affect agriculture. System provides alerts to farmer if weather conditions are not normal, chances of rain, storm etc.

39. Smart Shopping Application Using Android Studio and Unity by SanjeevGautam, PiyushGawali, AnishGulati, ManjeetKhanna, TushanBelawat

SMART SHOPPING APPLICATION USING ANDROID STUDIO AND UNITY

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In past few decades, an incremental growth in queues has been witnessed all around the world in shopping marts at the time of checkout. There has been an incremental research in order to bring down the average human time spent while checking out using various Machine learning and Artificial Intelligence techniques. This paper elaborates the use of barcode scanning through a mobile application and the use of indoor navigation so as to quickly locate products and also a potential data analysis scheme for shop owners so as to analyze their customers buying trends. The methods employed involve scanning the barcode of a product through app and adding product in your cart and paying through a designated payment gateway. In this paper, proposed system is a mobile application for scanning barcodes present on products. By using mobile camera and integrating it with a mobile application and using it as a barcode scanner, also detecting the product details thereby giving an option to user to add the product in cart and head to payment gateway.

40.Facial Recognition Attendance System by AyushChirde, PayalKamthe, AishwaryaSomvanshi,SaloniTikait, Prof. T. R. Patil

Facial Recognition Attendance System

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In this digital era, face recognition system plays a very important role in nearly every sector. Face recognition is one of the mostly used natural science. it'll used for security, authentication, identification, and has got a lot of blessings. Despite of obtaining low accuracy once compared to iris recognition and fingerprint recognition, it is being wide used due to its contactless and non-invasive technique. what's a lot of, face recognition system can even be used for attending marking in colleges, colleges, offices, etc. This system aims to make a class attending system that uses the thought of face recognition as existing manual attending system is time overwhelming and cumbersome to stay up. And there are conjointly prospects of proxy attending. Thus, the requirement for this technique can increase. this technique consists of four phases- data creation, face detection, face recognition, attending updating. Data is created by the pictures of the students in class. Face detection and recognition is performed exploitation Haar-Cascade classifier and native Binary Pattern chart algorithmic program severally. Faces unit detected and recognized from live streaming video of the room. attending is armored to the individual faculty at the tip of the session. it's standard that marking attending of the scholars is associate degree obligatory half in academe. standard technique of marking the attending is being followed by numerous establishments and Universities with several manual interventions. to scale back time consumption and human effort, the employment of associate degree automatic method of marking attending supported image process may be implemented. Authors have projected a sensible attending observance system through face detection and recognition techniques supported their face expression. a group of pictures of the scholars are antecedently fed to the system against that the live pictures of the scholars are compared and attending would be recorded supported facial characteristics. The projected approach uses CNN rule for coaching the pictures and LBPH visual descriptor for image classification. These models are going to be capable of providing higher degree of accuracy compared to already existing literature work. Authors have compared their experimental results with the present approaches and located satisfactory.

41.Person Detection for Social Distancing and Safety Violation Alert by RanjeetNimbalkar, SachinNagare, Mrunmayipatil, ManasPatil

Person detection for social distancing and safety violation Alert

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In the battle against COVID-19, social distancing has well-tried to be a particularly made strategy for swiftness the diseases unfold. Folks are being urged to limit their contacts with each other so as to cut back the chance of the virus spreading through physical or close to contact. within the past, AI/Deep Learning has shown promise in determination a range of everyday issues. To see a transparent summary of however used Python, PC Vision, and Deep Learning to trace social distancing publicly areas and workplaces during this projected framework. The social distancing detection tool can monitor whether or not folks are maintaining a secure distance from one another by analyzing time period video streams from the camera to make sure social distancing protocol publicly places and therefore the geographic point. Observation tend to might incorporate this methodology into security camera systems at offices, warehouses, and retailers to trace whether or not folks are maintaining a secure distance.

42.Fractal MIMO Antenna For 5g WLAN and WIMAX Application
KantilalKharat, ShwetaChaudhari, BhushanKhadke, PoojaJomiwale

Fractal MIMO Antenna for 5G WLAN and WIMAX Application

Kantilal Kharat[1], Shweta Chaudhari[2], Bhushan Khadke[3], Pooja Jomiwale[4]

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In the last few years growth in wireless communication domain is tremendous. From the year 2007 requirement of mobile cellular increases five times of telephones. But some service providers companies are felt the importance of an efficient network and in the equally efficient design. The enhanced technology of 2G, 2.5G, 3G, & 4G networks increases the effect of many services on network efficiency and it has become more critical sometimes. In network designing scenarios have developed with not only 2G or 3G networks but also with the evolution of 3G to 4G and 5G networks. In current work going to design a fractal Antenna having which can able to give up to the 6GHz Frequency. Using this fractal technology and number of resonating frequencies increases with increases in iteration as added 3 iterations. The proposed patch antenna with CST- Studio Software shows good radiation pattern, high frequency and good gain up to 4.46dB.

43.Memory Aid Device for Alzheimer Patients by S.D. Sawant, ShivrajGawande, SakshiThorat, ShradhaGundawar

Memory Aid Device for Alzheimer Patients

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Alzheimer's disease (AD) is a devastating disease that affects a large number of elderly individuals today. Taking care of Alzheimer's sufferers can be physically and mentally taxing. At the same time, it's critical to give patients the freedom to live independently. The most well-known type is Alzheimer's disease, which destroys the individual's memory, making the well-known encompassing new for them. People with Alzheimer's disease have a harder time remembering things, thinking clearly, communicating with others, or dealing with themselves, and they don't always react when their name is called. Dealing with people who have Alzheimer's disease is extremely difficult and hard for their families. This illness frequently causes wandering, which is a source of concern for many families who are concerned that the patient will become lost or get into dangerous situations.

44.Design And Development of Lora WAN Protocol at NodeSohailJamadar, by Amisha Bhatia, RiyaAgrawal, Prof S. M. Jog

Design and Development of Lora WAN Protocol at Node

Sohail Jamadar[1], Amisha Bhatia[2], Riya Agrawal[3], Prof S. M. Jog[4]
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IoT is the Field which handles the high data in real time application that's why it is one of the fastest growing fields. All street lamp applications are available in the one direction; there is no communication between node and base station. All Systems available in market are manual, it requires human to turn on and turn off the light. Here Lora technology is used. Lora is very effective technology for communication. The study also covers the energy saving street lights based on IoT. Lora uses Radio Frequency transmission for data transfer which offers long range of communication and it is totally free of cost. The different operating frequency bands for Lora technology are 433MHz, 915 MHz and 868MHz.

45.Wireless Digital Stethoscope by Varun Rathor, Charanjit Dhiman, Aman Shinde

Wireless Digital Stethoscope

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In view of the recent Covid-19 epidemic, this enforced tight social distance standards on people's safety. Here came up with a concept of a wireless stethoscope that would not only help doctors but also patients to adhere to regulations on social distancing. It also provides patient's metrics from the patient's home so as the medical authorities can engage patients to recover remotely and safely. It can also be implemented in ICU wards which would further lower the risk faced by medical workers. The data obtained from the patient's end is passed on to the doctors and can be saved for future reference. This work gives a reliable alternative that is more public centric, i.e., accessible to all sections of the population, by cutting the cost of the device and digitalizing the capabilities of an acoustic stethoscope. Because of the system's simplicity, a non-medical practitioner may operate this electronic stethoscope with ease.

46.Covid-19 Safe Distance Alert System for Blind People by Amit Kale, HarshadN.Lokhande, ShubhamKandharkar, DeveshChaudhari

COVID-19 Safe distance alert system for blind people

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Real time object detection and distance measurement for blind people to maintain social distancing. Real time object detections and calculating distances are important and challenging tasks in many computer vision applications such as video surveillance, robot navigation and vehicle navigation. Object detection involves detecting the object in sequence of videos using OpenCV under python. Every distance calculation mechanism requires object detection mechanism either in each frame or when an object appears newly on the video sequence. Object distance is the process of calculating distance of an object or multiple objects from the camera using single vision camera.

47.Touch Less System for Fruits Sorting and Packaging in Shops by ApoorvaKhened, HarshadLokhande, PratikshaGote, PreetTodkar

Touch less System for Fruits Sorting and Packaging in Shops

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The time required discovering the product and ready within side the lengthy queue for checkout of the shops is a common problem in our everyday lives. The automatic shop is the answer proposed to such problems. These shops are significant for each financial and social development because it reduces the efforts of guide operation and is time-saving. This system is a need of an hour these days since Covid-19 denies us to make direct contact with fruits or vegetables. Now-a-days deep learning gives evolution with brilliant performance in object detection. This paper gives solution as, robotics based totally automatic shop which uses deep learning to classify the products which helps to save our efforts and time. The Mobile-Net is used to detection of fruits on 2 classes with 85% accuracy in detection. Robotics combined with virtual technology inclusive of picture detection, cloud and analytics, makes the structures correct and supplies more modern efficiencies.

48.Suspicious Activity Detection Using Image Processing by PhalguniKadam, ShwetaGawande, AkshitaThorat, Rohini Mule

Suspicious Activity Detection using Image Processing

Phalguni Kadam[1], Shweta Gawande[2], Akshita Thorat[3], Rohini Mule[4]

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Nowadays, video surveillance is used almost everywhere for security. The traditional method of monitoring cameras requires constant human intervention. Using Deep Learning and Image Processing, the proposed work aims to eliminate time and effort wasted on monitoring video surveillance cameras. Predicting human behaviour is almost impossible. Deep Learning is used to detect suspicious or normal activity and to warn the user if any suspicious activity is detected. The proposed system strives for the detection of real-world suspicious activities such as burglaries, assaults etc. in surveillance videos.

49.Implementation Of Robot for Elderly Assistance Using Ai Approach by AniketSarode, ShrihariHingole, Ritwick Raj, Makarand. M. Jadhav

Implementation of Robot for Elderly Assistance Using AI Approach

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In India, the percentage of elderly people is 8% of the total population. Due to aging, all experience numerous health issues. On the other hand, sometimes they remain alone at home. Therefore, a little robot is designed and developed for Fall Detection and Pill reminder. Further, an Emergency Switch feature is provided to keep them healthy both physically and emotionally. The system is developed using Raspberry Pi. Where OpenCV source library is used to support computer vision, machine learning, and image processing functions. The CNN algorithm is implemented to carry out different tasks and activities. The computational time of 5 seconds is achieved to send cue mail to their kins. This will save the elderly from mishaps. The precision of detection is 95%.

50.Design and Development of Sigfox Protocol at Node by YogeshDamdhare, ChaitanyaGhodake, Nikhil Panmand, MakarndM.Jadhav

Design and Development of Sigfox Protocol at Node

Yogesh Damdhare[1], Chaitanya Ghodake[2], Nikhil Panmand[3], MakarndM.Jadhav[4]

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In recent years, electricity connections have been provided to all citizens. Thus, energy use has doubled and improved the standards of living. It is observed that street lighting has become one more component of energy consumption in India. Street lighting is consuming 18-38% of the total energy bill. The reason behind this energy consumption is due to inefficient deployment of power resources. In this paper Sigfox technology is used to develop a system for monitoring energy usage. This is done by sensing the density of vehicles and public presence on pedestrians using a cloud base low power wide area network. The proposed work was able to save on average 30-35 percent of energy.

51.IoT Based Saline Level Monitoring System by KritiOjha, JatinParihar, GouriBrahmankar

IoT Based Saline Level Monitoring System

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A failure of a person, inattentiveness and a greater number of patients, the saline is totally consumed. Initially, this might be inferred as an event. But the consequences are harmful. Just after the saline finishes, blood rushes back to the saline bottle due to difference in blood pressure and pressure in the empty bottle. Thus, Unique health monitoring systems have being developed with less human interference which will be available at low cost in rural as well as urban areas. The system objective is to trouble-shoot the above-mentioned problem efficiently. By means of this the nurse can monitor the amount of saline even in the control room. An automatic saline level monitoring consists of Level sensors which recognize the status of liquid in the bottle whether it is normal or warning status. The recognition of saline drop rate is quite accurate. The output obtained from the sensor is processed to check whether the saline bottle is empty. When the saline bottle goes below a threshold level, the alarm sound will be produced. So, the system reduces continuous monitoring of the patient by nurses.

52.Machine Learning Based Brain Tumor Detection by RajshriShelke, TanmaySutar, SurajGayakwad, Prof S.Y. Tamboli

Machine Learning Based Brain Tumor Detection

Rajshri Shelke[1], Tanmay Sutar[2], Suraj Gayakwad[3], Prof S.Y. Tamboli[4]

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The brain tumours are the most common and aggressive disease and it is challenging task to detect brain tumour in early stages of life, it leads to a very short life expectancy in their highest grade. Thus, treatment planning will be a key stage to improve the quality of life of patients. To evaluate the tumour in a brain used various image techniques such as Computed Tomography (CT), Magnetic Resonance Imaging (MRI) and ultrasound image etc. Mostly, in this work MRI images are used to diagnose tumour in the brain. The huge amount of data generated by MRI scan helps to classify tumour vs. non-tumour in a particular time. But it having some limitation (i.e.) accurate quantitative measurements will be provided for limited number of images. To prevent death rate of human trusted and automatic classification scheme are essential. The automatic brain tumour classification will be very challenging task in large spatial and structural variability of surrounding region of brain tumour. In this work, automatic brain tumour detection will be proposed by using Convolutional Neural Networks (CNN) classification. The deeper architecture design will be performed by using small kernels. The weight of the neuron will be given as small.

53.Detection Of Enemy's Range for Solider by NetraPurvant, PrajaktaTolmare, Sakshi Kale, UmaraniSuryawanshi

Detection of Enemy's Range for Solider

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Now a days, realizing high risk factor for soldiers in army. So, this system is implemented. Main aim of this system is to detect enemy and distance. To detect accurate and efficient way of object detection. Initially the system takes recognizing image using image processing blocks and finally goes under Haar cascade classifier which divide itself into two parts as Haar feature for image and cascading of classifier with real time detection. In this fashioned a complete deep learning approach. It added some security factor so that user can handle this system very easily.

54.Field Monitoring System for Farmers by VishakhaNehete, NehaNili, Saurabh Kumar, Prof S. Y. Tamboli

Field Monitoring System for Farmers

Vishakha Nehete[1], Neha Nili[2], Saurabh Kumar[3], Prof S. Y. Tamboli[4]

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In proposed system a computer vision device that utilizes a multi-spectral imaging sensor to detect external defects on orange citrus fruits. To begin, the proposed algorithm segments the orange fruit solely using the NIR portion of the captured Near-Infrared (NIR) and RGB images. Second, segmented RGB and NIR orange fruit images are pre-processed using certain adaptive pre-processing techniques. As a result, a thresholding technique is used to detect defects in the orange fruit's seven distinct colour components. Finally, voters vote on whether or not the citrus fruit image is flawed based on the seven threshold colour variable images. Utilities and parcel distribution companies have increased their performance over the last year. Online shopping provides many benefits to the postal and distribution industries. The seller's items are packaged in box-shaped cardboard boxes or wooden boxes in a variety of sizes. A contour-based shape representation algorithm is used to detect contoured objects. Contour is made up of fragments of edge or curve that represent geometric concepts. The object's size must be determined in order to determine its surface area. Dimensions are sometimes used to refer to an item's length, width, and height. The volume of the parcel box will be calculated using a multiplication programmed based on its length, width, and height. As a result, in a computer vision-based automated sorting system, contour-based object detection could be used to determine the volume of an object. The most critical characteristics for correct citrus classification and sorting are colour andsize.

55. Smart Id Card for Covid-19 by Prof. S.P. Deshmukh, Mr. Prashant Bhopal, Mr. Sourabh Paul, Ms. PranjaliYeole

Smart ID card for Covid-19

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The college lives of students cover a wide range of transactions which he/she has to make in order to fulfil the requirement of the day. Some of the Factors are usually covered by the small denominations of current situations carried by students, which allows them to take care for public. To reduce the hassle created by the variety of modes of payment, suggest a Smart-ID card which can be used to pay for day-to-day campus needs and allow student or faculty member of the college/university to keep track of the distancing, maintain their social distance. Social distancing refers to a host of public health measures aimed at reducing social interaction between people based on touch or physical proximity. It is a non-pharmaceutical intervention to slow the spread of infectious diseases in the communities. It becomes particularly important as a community mitigation strategy before vaccines or drugs become widely available. This essay describes how a protracted adherence to social distancing guidelines could affect the Indian society. Changes are expected in some of the prevalent cultural norms such as personal space and common good. Working patterns are likely to become more flexible and promotive of social distancing. Human interaction based on digital technology is likely to increase. The implications for public health in India due to such changes are also discussed.

56.IoT Based Climate Monitoring by AneekParashar, VaibhavThorat

IOT Based Climate Monitoring

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The Internet of Things (IoT) is a computing concept that describes a future where every day physical objects will be connected to the Internet and be able to identify themselves to other devices. In the future, every device is more likely to be connected to the web directly with the users expecting it to be responsive to their needs [1]. In this work, modules are created which is used to monitor various environmental parameters and update it real time data to a server. The paper involves the design of an IoT based solution to monitor the data obtained from the sensors as well as weather forecasts predicted for a particular region. This could help in connecting multiple sensors to a system and obtaining the data on a central display. A weather station is a device that collects data related to the weather & environment using different sensors. There are two types of weather stations, one which is having own sensors and the second type of weather station is where data were pulled from the weather station servers.

57.Smart Attendance System by Abhimanyu Kumar, SonuYadav, Umarani Suryawanshi

Smart Attendance System

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As everyone knows the traditional approach of attendance, takes quite long to take attendance and pronounce each and everyone's name properly of a bulk of students. And in the changing world must have to update our attendance system in a smarter way with speed and efficiency to reduce the time required to take attendance in our traditional way. Here, presenting a very simple NFC (Near Field Communication) System with an android application device to track the attendance details of the student and providing some access permissions to the student in the campus. The system implemented in NFC is highly secured. Although the higher-layer cryptographic protocols (e.g., SSL) are used to establish a secure channel in order to overcome General Security Threats like Eavesdropping, Data modification, Relay attack and Lost property and walk-off. Although NFC based applications run in a similar manner to Bluetooth on mobile device; the working principal behind near field communication is based on RFID. This system is applicable to not only students but also teachers, employees and workers.

58.Design And Simulation of Self Charging Electric Bicycle by Prof. R.K. Nanwatkar, Shreyas Joshi, PradyumnJawale,AbhijeetWarade, NishantAndhale

Design and Simulation of Self Charging Electric Bicycle

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Now-a-days it can be seen that most of people are focusing on cycling for exercising and short distance traveling due to unhygienic lifestyles and increase in environmental pollution and its harmful effect on human. Looking at such circumstances our project is proposed to generate electrical energy produced by the person via paddling and later consume the same energy for automatic running of the cycle through the conversion of electrical energy into mechanical energy by using suitable energy storage device. The demand for Electric Bikes is growing throughout the world due its characteristics of zero emission effects and longer life cycle. An electric bicycle uses electric motors for the purpose of moving which run on different types of Batteries. These batteries undergo many charging and recharging cycles in running conditions. Through our project the required amount of external energy for charging the batteries can be reduced which will also reduce the use of fossil fuels and also will help to reduce the environmental pollution. The theme of project is comprised in two sections, in first part mechanical energy is converted into electrical energy by paddling mechanism and in later part the stored electrical energy is converted into mechanical energy to run cycle on charged batteries. A comparative analysis is also proposed for different batteries to find out efficient types in terms of economic aspects such as cost, thermal runaway, etc. in this work an electric generation mechanism by paddling the cycle is proposed for specified amount of time and based on that the generated electricity is calculated to be stored in battery for charging. Further the simulation results using MATLAB / Simulink has been analyzed for the proposed electric bicycle with different types of batteries, to study the various characteristics of the proposed set up with variation of battery parameters and distance covered by the cycle.

59.IoT Based Smart Vehicle System by Prof. R. K. Nanwatkar, RakeshWani, Harish Mali,Sidhharth Sahasrabudhe, Prasad Bhargude

IOT Based Smart Vehicle System

Prof. R. K. Nanwatkar[1], Rakesh Wani[2], Harish Mali[3], Sidhharth Sahasrabudhe[4], Prasad Bhargude[5]

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Today in this digitalized world, if the fuel indicator in the automobiles is also made digital it will help to know the exact amount of fuel available in the fuel tank. As Well As Proper awareness should be created among the people about the harmful gas emission. In order to aware the people, there should be an indicator present in the two wheelers. This work introduces carbon monoxide indicator in the two wheelers. The above furnished fact is considered in our project and found out a proper solution for indicating the accurate availability of fuel in the tank digitally. As well As one can check the emission rate in the frequent interval and can take remedial action. This prevents degrading the environment from pollution. In our project the main blocks are Two-Wheeler, Tank, Battery, micro controller unit, fuel level sensor, Carbon monoxide indicator And LCD Display. Here sensors are placed at certain place to find out the fuel level and the signal is sent to the micro controller unit for further operations. but the market available digital display units were displaying the information in terms of percentage but our proposed method will be displayed in terms of exact fuel level and this information are pre-programmed according to the sensor positional values (Resistance-Voltage). In this paper a float type sensor is placed within the fuel tank the variation of the fuel can change the position of variable resistance which is connected with the float. The varied resistance can change the voltage of the analog fuel level indicator to show the approximate value. But the variable resistance from the fuel tank is connected with the analog to digital converter unit to show the exact quantity of fuel in the fuel tank. And Working of Carbon Monoxide Sensor is the exhaust from the silencer enters the passage and has the contact with co sensor. In presence of detectable gas, the sensor conductivity increases depending on the gas concentration in the air. A simple electrical circuit can convert the change in conductivity into output signal which corresponds to the gas concentration. The voltage drop across the resistance is the output of the sensor circuit. This voltage gets converted into carbon monoxide rate and is the display.

60.Performance Evaluation of Heat Pipe Oil Cooler in Hydraulic System by Prof. KamleshMahajan, Mr. AkashMunfan, Mr. RushikeshAdhav

Performance Evaluation of Heat Pipe Oil Cooler in Hydraulic System

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Overheating is most common problem with hydraulic equipment. Heating of hydraulic fluid in hydraulic system during operation is caused by inefficiencies. Inefficiencies are due to loss of input power, which is converted to heat. So, to achieve stable fluid temperature, a hydraulic system capacity to dissipate heat must exceed its heat load. In current market, various types of heat exchanger are used to avoid overheating, but they require a lot of space, extra power and investment is required for the cooling water circuit and maintenance of the heat exchanger. Therefore, oil coolers are needed to design specifically for mobile hydraulic applications where high performance and efficiency are required and physical size is minimized to allow easy installation. Typical applications include mobile cranes, concrete mixers and pump trucks, road paving machines & transmission cooling. The oil cooler uses a combination of high-performance cooling elements and hydraulic motors to give long trouble-free operation in mobile hydraulic applications. The compact design allows the coolers to fit most equipment and provide the highest cooling performance in heat dissipation whilst minimizing space required. The paper focuses on the design and performance analysis of a single unit of oil cooler, which consist of base module aluminium block with concentric channels for oil passage moving about a heat pipe evaporator section which then dissipates the heat to a rectangular fin structure assisted by forced air cooling. The paper discusses the selection of heat pipe for the application of oil cooling and performance of the heat exchanger in terms of LMTD, effectiveness and overall heat transfer coefficient.

61.Design & Development of Agriculture Sprayer Vehicle with Solid Fertilizer by Prof. R. B. Mali, ShubhamGunjal, AjinkyaGaikwad, PrajwalJathar, Nikhil Mali

DESIGN & DEVELOPMENT OF AGRICULTURE SPRAYER VEHICLE WITH SOLID FERTILIZER

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Majority of the sprayer pumps available in market are back mounted, hand pumps that are used to spray pesticides. Pesticide spray pump have to be pumped manually and then carried on the back for spraying in the fields. Agriculture sprayer vehicle operates the pump automatically as it moves, pump is mounted on vehicle so no stress to operator, very low cost. The pumping mechanism is connected to the rear wheel shaft through a gear train. Thus, motion of the wheel is converted into automatic pumping of the pumping system. Earlier designs were either top mounted piston handle pumps or side mounted handle piston Pumps. Both of them are to be carried on the back. Thus, the spraying pressure is developed only when the handle is pumped. This causes fatigue and makes the operator tired. For spraying action, the pump is to be continuously pumped by hand to develop sprayer pressure inside the tank, so also the pump with the filled liquid is heavy and has to be carried on the back, hence a simple system that pumps fluid and carries the pump on a vehicle so that operator does not have to carry the pump is needed. Crank link operated pump works automatically when vehicle is moved. The pumping mechanism is connected to the rear wheel shaft through a gear train. Thus, motion of the wheel is converted into automatic pumping of the pumping system. Pump is carried on the moving vehicle; the pump is provided with two additional mechanisms namely to uniformly spray the pesticides on the crop and secondly a solid fertilizer sprayer with the help of wheel motion. Project work involves the design development analysis of components, fabrication of the unit and testing the equipment to find performance parameters.

62.Design Modification and Fatigue Life Analysis of pressure VesseFilter Tube Sheet by Prof. G. V. Devke, Mr. SurajGaikwad, Mr. AkshayJagdale,

Design Modification and Fatigue Life Analysis of Pressure Vessel Filter Tube Sheet

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Tube sheet in pressure vessel use to filter the natural gas during mining process for many petroleum industrial applications. During this process the natural gas contains many contaminating elements with sulphur as main ingredient, that combines with sand or other carbon elements to create harmful effects of particulate impurities like slogging, clogging, fouling on the surface of the tube sheet. These impurities create chemical reaction with tube sheet surface material which are normally made up of steel or ceramics. During working condition, the layer of clog is deposited on the filter tubes sheet surface and tubes. This clog layer creates increase in pressure inside the vessel. Once this pressure level exceeds the acceptable value, the filter tube sheet is cleaned either weekly or monthly basis. But this cleaning process needs to stop the entire plant working till the end of complete removal of clog, this creates reduction in efficiency parameters in terms of cost. In the present work design of pressure vessel filter tube sheet is performed on the basis of working conditions. Further it has been modified as per the corrections and suggestions given by end user. Number of holes for filtration and its pattern has been calculated on basis of modified design to get effective filtration with maximum efficiency. Another solution in terms of replacing filter unit has been proposed with which is divided into two sections and after every 4 to 5 seconds other section of tube sheet receives a back pressure of one second and washes out the other part of filter tubes. This modification in cleaning process gives efficient results without shutting down the plant production. Since it is a regular cycle so its needs to be shut down the plant once a year for full clean-up. This modification in working cycle creates cycling loadings on the tube sheet i.e., reverse pressure for cleaning and forwards pressure for working of pressure vessel. This compressive and tensile force creates fatigue on the tube sheet and reduction in its fatigue strength. Therefore, this tube sheet needs to analyse with modified concept for reduction in stresses and improved fatigue life. Dynamic analysis has been performed to evaluate fatigue life with modified thickness with dense meshing to get effective solution with respect to change in thickness of tube sheet.

63.Experimental Analysis and FEA Validation of Woven Composite Pin Joints by Prof. P. D. Gharge, Prof. R. K. Nanwatkar, Mr. AnandOmprakashVerma, Yogesh

Experimental Analysis and FEA Validation of Woven Composite Pin Joints

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The investigation is focus on developing a reliable computation procedure to analyse initial failure load for pin-loaded holes at layered composite structures. Finite element method (FEM) is used to determine deflection and stress distribution around the fastener hole. Hashing Failure Criterion is used to determine composite plate failure. Special attention in this work is paid to geometrical dimension variations and its effect on first failure load of the composite plate. The main objective was to investigate the possibility of predicting the properties of the joint from the experimental tests, and validate the FEA model, the validated model further used for to study pin diameter variations properties of the joints. For material properties the standards test ware carried out on Universal Testing Machine to obtain its tensile yield load, and this obtained stress strain curve is utilized in FEA model, for material nonlinearity, remaining material properties are taken from the manufacturer of the plate. A refined finite element model was developed in which the nonlinearities due to contact between the pin and the hole were taken into account, and material nonlinearity also taken in to consideration for the analysis Particular attention was paid to account for the influence of the clearance between plate and pin ware investigated by numerically. In finite element pin/plate model is analysed. The influence of coefficient of friction assembly containing pin-loaded hole is also investigated. The fixtures and the test specimens are prepared for the testing and its testing ware carried out on the Universal testing machine around 16 different geometrical variations. different geometrical variance samples are tested under the tensile test for prediction of the first failure load with [45]3S and [0] 3S two types stacking sequence, Specifically, the effect of orientation of the ply angel ware simulated in FEA, with validated FEA model and for first failure load verses angel of ply rotations effects ware studied, which has shown significant similarity to a basic load verses ply angel curve, In further simulations the effect of the increase in the diameter of the pin on failure load ware concluded. In conclusion, good agreement between experimental results and numerical predictions has been obtained from Finite Element Analysis, which is validated by the testing results the computation results are compared with obtained experimental results.

64. Analyze And Rectify Spring back of The Frame Bonnet FrontAutomobile Part Using Simulation Tools by Mr. ShashikantGavali, Prof. R.R. Kulkarni

Analyze and Rectify Spring back of the Frame Bonnet Front Automobile Part using Simulation Tools

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This paper highlights the spring back compensation of frame bonnet front automobile part by using simulation tools. Frame Bonnet Front has more spring back than typical steel, affecting the end part's dimensional correctness. While stamping a sheet metal component, spring back compensation is a significant difficulty. Spring back is the geometric change that occurs when a part is freed from the tool press. Spring back is caused by the elastic release from the bending stress given to the sheet metal during forming. By using over bending technique, the material is bent beyond its intended angle, allowing the spring back to return it to the intended angle. The over bending compensation value can be carried out with the help of simulation. The compensation values from simulation applied to practical bending process. The final results of the part on the inspection fixture were within the allowed tolerance. Toolmaker can save a lot of time and money by using simulation for spring back in their engineering and testing.

65. Automatic Exterior Wall Painting Machine by Prof. Goutam V. Pise1, Mr. Kunal G. Wankhade2, Mr. Pranav S. Chatane3, Mr. Harsh S. Chintamani4, Mr. Sahadev

Automatic Exterior Wall Painting Machine

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In today's world, robots are used in various applications such as military, medical, automobile industries etc. But if construction industries are considered then in those industries robots are not used. The robots are used to increase the efficiency and reduce the time in all the fields. It can also be used to do hazardous and dangerous jobs in any field. Now days, the wall painting is done manually. This process can be simplified by using robot. It is very difficult to paint the wall. So, to overcome this difficulty, manufacturing of exterior wall painting robot which is help to reduce accidents as well as increase accuracy. The components of our project are decided. The 3d model will be drawn with the help of Catia software. All the components are manufactured and then assembled together. The experimental testing will be carried out after the final assembly will be done. The result and conclusion will be drawn after the experimental testing. The painting chemicals can cause hazards to the human painters such as eye and respiratory system problems. Also, the nature of painting procedure that requires repeated work and hand rising makes it boring, time and effort consuming. When construction workers and robots are properly integrated in building tasks, the whole construction process can be better managed and savings in human labour and timing are obtained as a consequence. The automatic exterior wall painting machine has been design fabricated for painting walls easily. This machine can be used in interior work in industries and houses. It saves human power and time as well as labour cost. It gives the opportunity to reduce human exposure to difficult and hazardous environment.

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66. Design And Analysis of Automated Packaging Machine for Industrial Process of Bottles by Vinod M. Bansode1, Omkar N. Kashikar2, Abhilash A. Giram, Omkar

Design and Analysis of Automated Packaging Machine for Industrial Process of Bottles

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The main aim of this work is to pack bottles automatically. This project will automatically pack the tonic bottles with the help of Geneva wheel. The components which are used in the project are decided. The components are electric motor, Pneumatic cylinder, Geneva wheel, conveying system. The force will be exerted by the pneumatic cylinder on the bottles so it will go inside the box and it will get packed. This system is invented for the human convenience. The 3D model will be drawn with the help of CATIA software.

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67. Hydraulic Ram Pump as A Water Management system by AtharvaS.Dhanwat, Samarth.A.Bansode,Digvijaym.Mahajan

HYDRAULIC RAM PUMP AS A WATERMANAGEMENTSYSTEM

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The hydraulic ram pump is an application of the vast branch of engineering known as fluid mechanics one can say that it is a sub study of hydraulics and pneumatics. It uses the principle of compression of air using mechanical means using the primary component as a non-return valve. It uses a rich source of water like a lake or river which can be located at a long distance to provide water to places of higher altitude and utilize the water loss to our benefit by the means of irrigation. It is the practical study of an existential problem in our own state hence should get the leverage of industrial production and manufacturing provide as an alternative to the conventional methods of fluid management system and use it as a low-cost mechanism.

68. Design And Analysis of Four Wheeled Electrically Powered Mobility Vehicle by Prof. Ravibala A. Patil, Swanand A. Rasane, Piyush P. Patil, Pranav R. Sathaye, Arjun S. Mahamuni

Design and Analysis of Four Wheeled Electrically Powered Mobility Vehicle

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People with movement disabilities have numerous challenges in life, two of the most significant of which are dependency on others and mobility restrictions. As a result, people are unable to enjoy simple and personal activities such as shopping, going for a drive, riding on off-road terrain, and going on camping vacations, among other things. Though there are already various solutions available, such as wheelchairs, manual and electric wheelchairs, in this paper, design and develop an open, four-wheeled, electrically powered mobility vehicle to address the aforementioned difficulties. This approach will seek to address the inadequacies of present choices by offering people with movement limitations a secure, comfortable, and relatively cost-effective form of transportation. The goal of this work is to include the advantages of current available options, such as wheelchair seating, compact design of mobility scooters and wheelchairs, electric power source and speed of mobility scooters, and overcome their challenges, such as long range, more speed, stability of a four-wheeled chassis, off-road driving capability, sufficient storage space, comparable price range, and so on.

69. Design And Manufacturing of Protection Cap for Stub Shaft using Plastic Injection Molding by Malhar M. Mahajan, Atharva J. Joshi, Rohan U. Kshirsagar, Shrihari G. Khatri, Arun S. Thakare

Design and Manufacturing of Protection Cap for Stub Shaft Using Plastic Injection Molding

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In most of the industries the product is manufactured at one place while assembled at other location. So, during transportation and handling, from manufacturing to assembly plant the part might get damaged, due to which it will not fit to assemble, leading to big loss for the company. To avoid this, the part needs to be protected. By manufacturing of product using Plastic Injection Moulding (PIM), it will protect the part during transportation and handling. Considering strength as one of the important properties of the part, injection moulding is best suited for mass production of plastic parts. Hence, injection moulding is most widely used in local industry. This paper gives an insight of Plastic Injection Moulding process from designing to manufacturing of product, with certain process parameters that need to consider while designing for selection of optimum material for the product.

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70.A Review Paper: 360 Degree Air Cooler and Heater by YadnyeshKumkar, Prof. Manoj M. Joshi, AdityaMhaske,SujitWagh,AkshayPatil

A Review Paper: 360-degree Air Cooler and Heater

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360-degree air cooler and heater are a device used to cool or heat the air according to the requirement of the user. As the years are passing by the energy consumption by humans is also increasing as a result there will be no energy or less energy left for the future generations to use. To reduce the consumption of energy a 360-degree air cooler and heater need to be used. Another reason for the use of 360-degree air cooler and heater is reduction in global warming as the conventional air conditioning system gives out Chloro-Flouro Carbon resulting in depletion of Ozone layer due to global warming and also affects climate. Conventional air conditioning system uses three to five times electricity as compared to the 360-degree air cooler and heater which results in emission of a considerable amount of heat resulting in global warming. 360-degree air cooler and heater is also beneficial as compared to conventional air conditioning system as it cools the air of all the four direction with the help of chilled water. During the time of winters, the relative humidity of air is high which also leads to low dry bulb temperature so the cooler is in ideal condition, the efficiency is low as high relative humidity is present. Hence, using a heating coil will make the cooler more efficient even though the relative humidity of air is high and it will provide us with hot air in colder conditions. This paper reviews the various findings by different researchers to study and compare various design and results obtained with 360-degree air cooler and heater.

71. Design And Experimental Analysis of Oil Skimmer for Water Filtration by R. K. Nanwatkar, G. J. Sapakale, B. P. Korke, S. T. Waghmare,N.R,Ansari

Design and Experimental Analysis of Oil Skimmer for Water Filtration

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In this era of modern civilization, liquid fuel transport is mandatory around the world. But there have been several oil spilling accidents around the world and their negative effects are against all the living elements. In the last decades Bangladesh faces such problem randomly in sea area and as well as in the river side damaging a large number of livings alongside the river having a badly effect on the entire ecology. The local residents collect the spilled oil manually. The system is less efficient, slow and health hazardous. Belt Oil skimmers using Polymer, Teflon, Elastomer, Corrosion Resistant Steel materials belt are widely used for recovery of this oil. However, they are costly and unavailable. In this work a low-cost simple blanket belt skimmer device by using locally available equipment that will be capable to absorb the spilled oil rapidly from river water that is filled with animal and plant waste. After constructing such oil skimmer, the performance is evaluated that accomplish, oil having different physical properties. Our constructed device with minimum cost compares to the other conventional belt oil skimmer. Also, this oil skimmer machine is totally floating on the sea or river.

72. Design And functioning of Pneumatic Belt Conveyor Systemby N. R. Ansari4Prof. K.S. Mahajan, Vishwadeep Budhawant, Harshwardhan Kale, Ashish Ghodake, Prathamesh Bhor

Design and functioning of Pneumatic Belt Conveyor System

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A pneumatic conveying system is similar to a belt or chain conveyor in terms of material handling. The primary benefit of a pneumatic conveying system is that the material is moved in a closed loop, preventing contamination of the environment and vice versa. Different parameters that determine the design of the system, such as air velocity, pressure, particle size and shape, distance to be conveyed, are described in this topic. The findings from the research on the pneumatic conveying system during the last decade that took these parameters into account are also provided. For the design of a pneumatic conveying system, there is no standard approach. As the system's configuration changes, the variables involved change as well, necessitating a change in design considerations based on the applications. As a result, in the field of pneumatic conveying systems, there is a lot of scope for experimenting. The material handling mechanism is accomplished by reciprocating a double acting cylinder that is controlled by a solenoid-operated 5/2-way DC valve that is actuated by an ON/OFF relay control system. The chain and sprocket wheel mechanism converts the linear action of the piston rod into rotational motion of the belt conveyor. In current work can construct a system in which the conveyor's moving roller is driven by a pneumatic cylinder in this paper. The pneumatic cylinder will begin to reciprocate, and a power plate with holes will begin to roll along the sprocket. The sprocket begins to rotate unidirectional due to the power provided by the cylinder piston and power plate. As a result, our belt conveyor begins tomove.

73.Design And Analysis of Yoke of Mill Rope Coupling by Vinit Jagtap, V. B. Rajmane

Design and Analysis of Yoke of Mill Rope Coupling

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A conventional tail bar coupling can cause serious complications to the mill drive components. Misalignment between the mill and gearing, shaft cracks, thrust load, sluggish floating of the top roller, rounding of the shaft square ends, damage to the crown pinion, and damage to the last motion gear bearing due to excessive thrust are common problems associated with the tail bar coupling. The mill rope coupling is an alternative to the tail bar coupling that eliminates damage caused by misalignment between mill and gearing and reduces other problems caused by the tail bar coupling. The primary objective of the study is to Design and carry analysis of Yoke for Mill Rope Coupling considering that the cost & weight reduction is extremely important & the availability of the material, Mach inability & strength. Data of input power, output speed, Torque, Forces are calculated and analysed. Strain gauges will be used to measure torque. Study produced the following conclusions: design yoke after changing material & thickness of plate withstand after applying torque & forces.

74.Forest Fire Detection and Prediction Using Internet of Things by Dinesh H. Burnade, Kaushal Jain, BhavaniSutar, Chinmay Joshi, HarshalMahajan

Forest fire detection and prediction using Internet of things

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Forest fires pose a serious threat to ecologically sound forests and environmental protection, as well as causing tragic loss of life and substantial natural and individual properties, including thousands of hectares of forest and hundreds of homes.80% of fire-related costs could have been avoided if the fire had been discovered sooner. Forest fires become worse and can be detected and forecast with IoT-based Node MCU. The study is an honest attempt to comprehend the current system, studying various factors affecting forest fires. Tried to make it smarter with the help of IoT technology by linking the entire monitoring process to a cloud server. It has been utilized to identify forest fires in extensive surveys. The goal of this research is to look into the losses and damage caused by wildfires, both natural and human-induced and fire detection techniques. The major goal of this research is to anticipate how a fire will progress by monitoring temperature, humidity, and other factors.

75.RFID - Based Supply Chain Control and Management in Basic and heavy Industry by Ranu Rakshit

RFID - based supply chain control and management in basic and heavy industry

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Supply chain plays an important role in efficiency of basic and heavy industries. Its mainly focus on enhancement of dynamic control management via sharing and analysis of information from involved participants of the projects to reduce manufacturing conflicts and project delay. Integrating promising information technologies such as radio frequency identification (RFID) technology, mobile device-PDA, and web portals can help improve the effectiveness and convenience of information flow in supply chain system. RFID technology has moved from obscurity into mainstream application and provides cost savings through speed and accuracy of data entry. This study proposes a RFID based supply chain management system to intensify the information flow among the environment. It is feasible to adopt proposed approach which concentrated largely on digitization and automation of pre-processing paper work.

76.Automatic Solar Panel Cleaning Mechanism by Prof. S.A. Gurav, AbhijeetSonne, PranitJadhav, AshishkumarPandav, RohitAdat

AUTOMATIC SOLAR PANEL CLEANING MECHANISM

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With growing costs of electricity and concern for the environmental impact of fossil fuels, implementation of eco-friendly energy sources like solar power are rising. The main method for harnessing solar power is with arrays made up of photovoltaic (PV) panels. Accumulation of dust and debris on even one panel in an array reduces their efficiency in energy generation considerably and emphasizes the need to keep the panels' surface as clean as possible. The goal of our paper is to create an automated solar panel cleaner that will address the adverse impact of soiling on commercial photovoltaic cells. Specifically, in current work hoped to create a device that increases the maximum power output of a soiled panel by 10% (recovering the amount of power lost). Furthermore, autonomous cleaning robots are often only economical on a larger scale due to both installation costs and the fact that custom-made parts are needed to fit the plant.

77.Analysis And Optimization of Hybrid Energy Storage System for Electric Vehicle by Ravikant K. Nanwatkar, Dr. Deepak S. Watvisave

Analysis and Optimization of Hybrid Energy Storage System for Electric Vehicle

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Continuous increase in demand of efficient energy storage for automobile sector and with controlling mechanism to rise in environmental issues leads to adoption of hybrid energy storage system. This hybridization can be battery and IC engine or battery with capacitor to meet the energy and power requirement demands. Electric mobility deals with use of electric energy in automobile sector but problem lies in using pure electric battery-based vehicle are less power density at higher torque requirement as well thermal runaway for longer run. Many renewable energy sources like wind, wave and solar energy which can be used to generate electricity for charging EV batteries. Some conventional batteries like lead acid have drawbacks of increased in weight and size optimization for efficient energy storage system. Also, by using hybridization of IC engine with battery, still dependency on petroleum fuel and its environmental effects won't be controlled. Therefore, selecting option of hybrid energy storage system of lithium-ion battery and super capacitor can be an efficient option to meet the requirement of energy and power during working cycle. The structural design of BSH consists of high-capacity battery-type electrode and a high-rate capacitive electrode; its proper design will provide improvement in performance, reduction in cost, safer working conditions and environmental friendliness. The proposed work basically focuses on HESS for light vehicle. A comparative analysis of various hybridization is studied in this seminar work with case study involving simulation using MATLAB / Simulink software. The basic idea is to use converter, working as a controlled energy pump to maintain the voltage of the super capacitor at a value higher than the battery voltage for most driving conditions. The battery will only provide power directly when the super capacitor voltage drops below the battery voltage which results in a relatively constant load profile for the battery. In addition, the battery is not used directly to harvest energy from the regenerative braking; thus, the battery is isolated from frequent charges, which will increase the life of the battery and reduction in weight of vehicle as the batteries are sized to ensure many constraints like start up, acceleration, braking and energy recovery.

78.Automatic Anti-Reverse Braking System for Heavy Transport Vehicles by Prof. P.D. Gharge, Rahul L. Jathar, Suraj M. Ghadge, Sagar L. Sahane, Abhishek S. Labade

AUTOMATIC ANTI-REVERSE BRAKING SYSTEM FOR HEAVY TRANSPORT VEHICLES

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The Automatic Anti-Reverse Braking System is designed with 4 infrared sensors which detect the proximity of any object behind the vehicle when operating in reverse gear and a control circuit that activates the pneumatic braking unit. The aim of this system is to reduce and avoid any damage to vehicle, property and life due to human errors or mishaps. The role of the pneumatic braking unit is to stop the vehicle whenever the control system tells it to do so. The control system detects the proximity of any obstacle behind the vehicle with the help of four independently working infrared distance sensors. This system avoids accident by taking total control from the vehicle operator and getting activated independently. This adds an extra layer of safety to people from heavy transport vehicles that have tremendous potential to damage property or lives if not controlled properly. The anti-reverse braking system is fully automated.

79.An Empirical Study on Consumer Behavior Towards Online Shopping of Women Apparels in Kolhapur District by Sanjay Akaram Jadhav

An Empirical Study on Consumer Behavior towards Online Shopping of Women Apparels in Kolhapur District

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The internet revolution has redefined every business sector across the world especially online shopping and online shopping behavior of the people. The increased penetration of internet has fueled the online retailing across the world and specifically in the emerging markets of developing countries like India. The Indian retailing market is evolving their business models into e-retailing models. The Indian industry of online retailing has crossed 20.5 billion USD in the year 2017, and in 2018, it has crossed 25 billion USD and in 2021, there is expectation that it will increase up to 62Billion USD. The Indian companies are facing challenges in identifying that what is driving the concept of the online shopping.

80.One Wheeled Self Balancing Bike by A. R. Kare, DhanrajNimbolkar, Vishal Patil,PrasadVyavahare, AnirudhaLanjewar

One Wheeled Self Balancing Bike

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A Uni-Wheeled a Self-Balancing is creating a robot that is a replica of a human size bike. Traditional vehicle consisted of 2 or 4 wheels, were easily stabilized and relatively bigger in size. A conventional robot uses four wheels and four motors for motion, while A Self Balancing. Uni-Wheeled Robot uses only one and motors for motion. It is used mostly to cover shorter distances. It is A Self Balancing Uni-Wheeled Robot where human weight and angle plays a vital role on controlling the movement. These sorts of robots are supported the physical theory of inverted pendulum. The system in itself requires active control so as to be stable.

81.Wireless Charging system For Electric Vehicle by PrachiChaudhar, AkashSanap, PrachiBarasker,VaibhavChavan ,S.D Malavatkar

WIRELESS CHARGING SYSTEM FOR ELECTRIC VEHICLE

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This paper is designed to charge a rechargeable battery wirelessly for the purpose. Since charging of the battery is possible to be demonstrated. This work is built upon using an electronic circuit which converts AC 230V 50Hz to AC 12V, High frequency. The output is fed to a tuned coil forming as primary of an air core transformer. The secondary coil develops a voltage of HF 12volt. Thus, the transfer of power is done by the primary (transmitter) to the secondary that is separated with a considerable distance (say 3cm). Therefore, the transfer could be seen as the primary transmits and the secondary receives the power to run load. Moreover, this technique can be used in number of applications, like to charge a mobile phone, iPod, laptop battery, propeller clock wirelessly. And also, this kind of charging provides a far lower risk of electrical shock as it would be galvanic ally isolated. This concept is an Emerging Technology, and in future the distance of power transfer can be enhanced as the research across the worldis still going on.

82.Design And Analysis of Solid-State Transformer by Prof. P. M. Wararkar, Sourabh A. Naradekar, Kaushik M. Khare, PrathameshM.joshi, Pavan B. Narale

DESIGN AND ANALYSIS OF SOLID-STATE TRANSFORMER

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This paper tries to make appoint that Solid State Transformer is an effective replacement for the conventional LF (Low frequency) transformer. The common topologies of SST are discussed. The present drawbacks of LF transformer and the advantages and future applications of Solid-State Transformer are also mentioned. A Solid-State Transformer is a bit complex system to barrier of universal acceptance is discussed and projected. In this paper discusses the features of power electronic based solid-state transformer and its application in different electrical field, where conventional transformer can be replaced by the solid state transformer.

83.Automated Solar Powered Seed Sowing Machine by YogitaBhavari ,VishweshwarUdate, ShantanuWankhade, ManojGoski, S.D.MAlvatkar, S.D.Malvatkar

Automated Solar Powered Seed Sowing Machine

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In this work, developing an agricultural-based robot this robot should helpful for farmer people. In this robot, automatic seed placing and pumping the water to seed and using pick and place set up to remove the dry plant and sowing the seeds in that same place. Using the sensor to find the conditions of agriculture land. If any obstacle is dedicated means the robot will stop that place and soil moisture sensor is using to find the dry or wet condition in the plant if the plant is dry means the pump motor should be on and water will supply to plant. Agriculture is dominant employment activity of Indian people which determines the Indian economy. Greater parts of urban areas in India do not have adequate talented labor in farming segment and that influences the advancement of creating nation. Hence agriculturists should use advanced methods in cultivating lands. So far Seed strewing is performed physically by hands and spacing between seeds was not accurate while sowing the seeds. Traditional method of sowing seeds is achieved by hand and in some cases by scatter such that forming gaps and drip seeds by fist is utilized or two bullocks are used to lift the bulky machinery for dropping seeds and leveling the land. Hence automation is necessary to solve the issues in agriculture sector by enhancing agricultural machinery. Seed sowing is crucial task for farmer during the plantation seasons, if seeding the land area is more it requires a greater number of workers for sowing the seeds.

84.IoT Cloud-Based PF Controller by Nikhil Dhamal, TejaswiniJagtap, AishwaryaLondhe, Nikhil Jagtap

IOT Cloud-Based PF Controller

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In this environment, to save more energy for the future the power factor correction plays a major role in energy conservation. Therefore, this paper presents the system which monitors different factors of the induction motor and these data are continuously updated onto a webpage using IoT. If any defect occurs, the system sends alert messages to the concerned person and an electronic relay activates. As the inductive load rises there will be a fall in power factor, therefore this system incorporates power factor improvement mechanism by switching the capacitor banks. The main objective is to build an Automatic Power Factor Correction (APFC) Unit, for variable load which is able to monitor the energy consumption of an induction motor and automatically improve its power factor. It will help to reduce the penalty due to low power factor and the utilities in the protection of induction motor in addition the problems are identified before any failure.

85.Single Axis Solar Tracking Systemby VaibhavKoli, SahimKokate, N. R. Dagade, Sunayana Khairnar, Amol Kedar

Single Axis Solar Tracking System

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Biggest renewable energy source in the world is solar energy. Solar energy is an easily accessible and abundantly available alternative energy source in nature. It is clean source of energy available on our earth. For power generation purpose, getting solar energy from nature is very beneficial. Generally, the solar panels are used for harnessing the solar energy. This paper presents the performance of single axis solar tracking system using Arduino. The ultimate aim of this project is to development of process to track the sun & attain maximum efficiency by using Arduino & LDR sensor for real time monitoring. Light Dependent Resistors (LDRs) are used to sense the intensity of sunlight. Hence the solar panel is adjusted according to LDR & tracks the maximum energy from sun. The mechanism uses gear motor to control the movement of the solar panel. The microcontroller is used to control the gear motor based on signals received from the LDR. This prototype completely show single axis tracker tracks more energy and give more efficiency as compare to static or fixed solar panels.

86.MOSFET Based Inverter by SaurabhBartakke, RohitRarad, TejasPatil, ShubhamTakras, Bhagyashri Babar

MOSFET BASED INVERTER

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The power electronics device which converts DC power to AC power at required output voltage and frequency level is known as inverter. Inverters can be broadly classified into single level inverter and multilevel inverter. Multilevel inverter as compared to single level inverters has advantages like minimum harmonic distortion and can operate on several voltage levels. Inverters are used for many applications, as in situations where low voltage DC sources such as batteries, solar panels or fuel cells must be converted so that devices can run off of AC power. One example of such a situation would be converting electrical power from a car battery to run a laptop, TV or cell phone. This report focuses on design and simulation of single phase, three phase and pulse width modulated inverter and use of pulse width modulated inverter in the speed control of Induction motor. This paper will talk about the Inverters and how they work.

87.Smart Society Management System by Ajay Andhale, TejasMene, HarshadYeola,MadhulikaThakare,Prof.NikhilShelke

SMART SOCIETY MANAGEMENT SYSTEM

Ajay Andhale[1], Tejas Mene[2], Harshad Yeola[3], Madhulika Thakare[4],Prof.Nikhil Shelke[5]

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This paper presents a SMART SOCIETY MANAGEMENT SYSTEM is also known as Building Automation System (BAS), It is a Microcontroller (Arduino Uno) based control system installed in buildings that control and monitors buildings mechanical and electrical equipment such as lighting, security systems, power systems, HVAC (Heating, Ventilation and Air Conditioning) control system, Lifts, Fire Alarm, Detection System, Smart Car Parking, Solar Tracking System, Garden Watering system.

88.Prepaid Energy Meter Using GSM by Sonal Mule, SnehalKanase, VaishnaviDhumane, Vishal Ghadage, Prof. SharadPatil

Prepaid Energy Meter Using GSM

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The outdated way for deposition of a bill of energy consumption results in unwanted fault and wastage of time. Thus, this paper adopts a totally new concept of "Prepaid Energy Meter using GSM" to facilitate power utility and minimizes the labor work. This technology is good for all distribution companies, private companies, IT parks and in residential areas also. The motive of this paper is to develop and design a Prepaid Energy Meter based on SMS technology using GSM. In this technique some threshold data is set for unit consumption and it stops the energy supply when amount of unit consumption goes below the threshold value. After it reaches the threshold limit an alert message is sent via GSM i.e., as it reaches the subsidy unit. After it reaches its monthly limit, it gives an alert message which indicates the bill amount. If the bill is not paid then power will be automatically shut down after a period of time. Here only registered SIM card number is used to get information about the bill. If the consumer changes the mobile number and fails to register that changed number then the information won't reach the consumer.

89.IoT Enabled Solar Panel Battery Monitoring System by SanketParkhe, MahendraKamble, SwapnilDeshmukh, AzeemShaikh

IoT enabled Solar Panel battery Monitoring System

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At the present time, there sources that which used for electricity are costly and inefficient. That is why everyone must rely on those that are of in the least harmful to the environment and inexpensive. There are also additional benefits: Photovoltaic panels and photovoltaic plants use the natural sunlight for additional lighting. photovoltaic cells are used in applications that allow the use of taking solar energy and expanding it into electricity most of the solar systems are situated in sparsely populated regions, large-scale agricultural communities, as well as in medium-sized farm sites and smaller, agricultural local agricultural production facilities that have power grids for a machine to function, it must be operated by a human. This is a hardware-timed sensor system that tracks various variables, like temperature, voltage, current, and battery percentage and reports them on the cloud so you can see exactly when everything has reached the right value.

90.Acoustic Levitation by PawanSolanke, RajdeepDhotre, VivekAnandBharkad, Aaryan Kumar, Mrs. A. O. Ghokhale

Acoustic Levitation

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Acoustic levitation uses acoustic radiation forces to counteract gravity and suspend objects in mid-air. Although acoustic levitation was first demonstrated almost a century ago, for a long time, it was limited to objects much smaller than the acoustic wavelength levitating at fixed positions in space. Recent advances in acoustic levitation now allow not only suspending but also rotating and translating objects in three dimensions. Acoustic levitation is also no longer restricted to small objects and can now be employed to levitate objects larger than the acoustic wavelength. This article reviews the progress of acoustic levitation, focusing on the working mechanism of different types of acoustic levitation devices developed to date. Start with a brief review of the theory, then also reviewed the acoustic levitation methods to suspend objects at fixed positions, followed by the techniques that allow the manipulation of objects. Finally, present a brief summary and offer some future perspectives for acoustic levitation.

91.Solar Powered Greenhouse Monitoring Using IoT by Abhinav B. Khedkar, Babasaheb D. Bhise, Dhanaji G. Shinde, ShantanuS. Hingane, Harshada S. Joshi

Solar Powered Greenhouse Monitoring Using IOT

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Greenhouses are climate-controlled structures with walls and roof specially designed for off season growing of plants. Most greenhouse systems use manual systems for monitoring the temperature and humidity which can cause discomfort to the worker as they are bound to visit the greenhouse every day and manually control them. Also, a lot of problems can occur as it affects the production rate because the temperature and humidity must be constantly monitored to ensure the good yield of the plants. Internet of Things is one of the latest advances in Information and Communication Technologies, providing global connectivity and management of sensors, devices, users with information. So, the combination of IOT and embedded technology has helped in bringing solutions to many of the existing practical problems over the years. The sensors used here are YL69 moisture sensor and DHT11 (Temperature & Humidity sensor). From the data received, Microcontroller automatically controls Moisture, Temperature, and Humidity efficiently inside the greenhouse by actuating an irrigating pipe, cooling fan, and sliding windows respectively according to the required conditions of the crops to achieve maximum growth and yield. The recorded temperature and humidity are stored in a cloud database (Thing Speak), and the results are displayed in a webpage, from where the user can view them directly.

92.Automation Fan Speed Control System Using Microcontroller by AnketBagal, Sachinchakane, GolsangiSachin, KushalBendale, Prof. Apurvakare

Automation Fan Speed Control System Using Microcontroller

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Automatic controls play an ever-increasing role in a human way of life. Automatic control is vast technological area whose central aim is to develop control strategies that improve performance when they applied to a system. the distinct characteristic of automatic control is that it reduces the human operator.

One such gadget is the fan. The fans are generally available with speed control; depending on the requirement the speed is set. Usually, when the temperature is high the fan set at high speed and at lower temperatures the fan is operated with lower speed. This is done manually using human. In this paper, an automatic control solution is suggested to control the fan speed. A circuit with LM35DZ temperature sensor, PIC16F877A microcontroller, brush less DC motor and few of electronic components is designed and implemented to control the fan speed automatically. As an additional feature LCD is used to present the temperature and the fan speed. Finally, the designed system circuit is tested in many times and performed very well.

93.Underground Cable Fault Detection Using GSM by Ishwari Sonar, AnisaShaikh, ShivaniPote,Saurabh Kulkarni4, Prof. A. O. Gokhle

Underground Cable Fault Detection Using GSM Modem

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This work is meant to discover the situation of fault in underground cable lines from the bottom station to precise location in kilometer employing a PIC Microcontroller (PIC18f458). In the geographical area the line runs in underground rather than overhead lines. Whenever the fault happens in underground cable it's tough to discover the precise location of the fault for method of repairing that exact cable. The projected system finds precise location of faults. This system uses AN PIC Microcontroller and corrected power offer. Here the present sensing circuits created with a mix of resistors area unit interfaced to PIC Microcontroller to assist of the inner ADC Device for providing digital knowledge to microcontroller representing the cable in kilometer. The fault creation is formed by the set of resistors of every 1kiloohm. The relays area unit controlled by the relay driver (ULN2003A). A16*2 LCD display alphanumeric display show connected to the microcontroller to display the knowledge. In case of short the voltage across series resistors changes consequently that is fade to ADC to develop precise digital knowledge to a programmed PIC Microcontroller kit that more display's precise fault location from base station in kilometers. GSM SIM-800 is additionally connected to the PIC Microcontroller it discovers the fault and send SMS to mobile.

94.Change Detection and Extraction of Information in Remote Sensing Images by SumitPawar, RohanSapkal, SaurabhPawar, RoshanPawar, Prof. MilyLal

CHANGE DETECTION AND EXTRACTION OFINFORMATIONINREMOTE SENSINGIMAGES

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Change Detection is a very vital task carried out on this planet and has been colossally performed and also researched in these recent decades. It has always been applied in infrastructure and surface monitoring technique, disaster management, the use in urban dynamics and other fields as well. Existing methods always rely on a simple mechanism where it has always been dependent for independently encoding bi-temporal images and objects to obtain and perform on their representation vectors, but it ignores the vitality of trifling-layer information which contains high-resolution and fine-grained functions and features which has often led to miss the small targets. In this paper our idea is to propose a system which is based on densely connected Siamese network useful for change detection techniques. Our method so the loss of localization information and data which is done by introducing the new module named attention mechanism which has been applied behind the information transmission module in order to give the corresponding attention weight and the required accuracy to each temporal image feature and the classified extraction which eventually enhance the change information of the image or object, want to predict the change for and improves final change prediction. The idea revolves around the fact that both quantitative and visual analyses of the experimental results show that our method improves highly on many evaluation criteria and the proposed method also has competitiveness and higher predictive ability among other change detection methods.

95.Bank Note Authentication and Classification Using Advanced machine learning
by Prof. D. M. Sonje, Prof. Alpana D. Sonje, Prof. Dr. HarshaPatil

BANK NOTE AUTHENTICATION AND CLASSIFICATION USING ADVANCED MACHINE ALGORITHMS

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Banknotes or the coins used by any nation to carry-out financial activities in the global market should be always genuine. However, some of the miscreants in the society provoke fake notes into the market which bears a resemblance to exactly the genuine note. It is stiff with human naked eye to notify the difference in between these two because they have a lot of analogous features. Hence, there is a need of competent validation system which informs accurately whether the note in the transaction is authentic or not. This paper proposes machine learning based methodology to classify the fake and genuine notes. Accordingly, exhaustive testing has been performed using Naïve Bayes, Multi-Layer Perceptron Neural Network (MLPNN) and Random Forest (RF) Algorithms on the standard data set. The testing results show that RF and MLPNN algorithms gives comparable results in terms of accuracy and other performance measures as compared to any other algorithms. The complete training and testing of the dataset is performed in WEKA software.

96.Magnetic Coupling with Resonance for Fast Wireless Charging of Electrical Vehicle by DeepikaAbhang, Bhakti Deshmukh, PoojaDube, DishaBhabad, Dr. S. B. Rahane

Magnetic Coupling with Resonance for Fast Wireless Charging of Electrical Vehicle

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This Paper discuss concept of wireless power transfer (WPT) with respect to existing wired charging system of the hybrid electric vehicle. Wireless Power Transfer (WPT) systems transfer electric energy from a source to a load without any wired connection. For the pollution free environment, the Hybrid Electric Vehicle is the key technology as compare to the existing gasoline system vehicles are the main cause of greenhouse gases. WPTs are attractive for many industrial applications because of their advantages compared to the wired counterpart, such as no exposed wires, ease of charging, and fearless transmission of power in adverse environmental conditions. The existing wired charging system has the limitations such as expensive, hazardous, and inconvenient and efficiency. Also, due to charging related issues consumer do not prefer the plugin charging system for vehicle. The limitations of the wired charging system are overcome and a maximum efficiency can be obtained. WPT is achieved through the affordable inductive coupling between two coils termed as transmitter and receiver coil. In EV charging applications, transmitter coils are buried in the road and receiver coils are placed in the vehicle. For medium-high power transfer applications Inductive WPT of resonant type is commonly used like EV charging because it exhibits a greater efficiency.

97.A Survey on Efficient Mobile Cloud Computing Through computational uoloading by Ms. KapsePreeti, Prof. Bangar P. H

A SURVEY ON EFFICIENT MOBILE CLOUD COMPUTING THROUGH COMPUTATIONAL OFFLOADING

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Mobile cloud computing (MCC) represented a new era in computing, in which cloud users are drawn to a variety of services over the Internet. MCC has a high-quality, adaptable, and cheap delivery platform for providing Internet-based services to mobile cloud users. The rapid growth of data produced by various smart devices, such as smart phones, IoT/IIoT networks, and vehicular networks running various specific applications such as Augmented Reality (AR), Virtual Reality (VR), and positioning systems, necessitates an increase in processing and storage resources. Offloading is a promising strategy for dealing with such devices' intrinsic limitations by transferring resource-intensive code, or at least a portion of it, to neighboring resource-rich servers. This paper explains how to use offloading techniques to make mobile cloud computing more efficient, as well as the framework for doing so.

98.IoT Using Smart Street Light System by Ms. Suvarna A. Bahir, Mrs. Manisha P. Desai, Ms. Pramila V Kharat

IoT using Smart Street Light System

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Street Lights. They are a part of our everyday life, so much so, that everyone doesn't even notice or acknowledge them sometimes. The only two things most people know about street lights is that during the night they light our sidewalks and roads and during the day they are shut off and unused. All may not look at or notice streetlights in our daily endeavors, however, as innovation speeds up, smart cities rise, and the growing need for energy efficient solutions increases, new technologies are enabling street lights to look at us and notice our movements and location. Modern street lighting systems are being asked to do more than ever before. In addition to fulfilling their primary purpose of casting light onto dark roadways, parking areas, and public spaces, these lighting systems are increasingly evaluated for how well they reduce energy consumption, improve safety for both pedestrians and drivers, and serve as the foundation for a range of Internet of Things applications, this smart system is best suited for street lighting in remote urban and rural areas where the traffic is very low.

99.A Review on Cyber Security and Cyber Attacks by G. P. Gawali

A Review on Cyber Security and Cyberattacks

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Assistant Professor and Head, Department of Computer Science R. A. Arts, Shri M. K. Commerce, and Shri S. R. Rathi Science College, Washim, Maharashtra

Cyber-attack is the buzzword today. Cybercrimes have become quite common in this internet world. Cybercrimes are increasing every year and the intensity of damage is also raising. Providing security against cyber-attacks has become the most significant issue in this digital world. However, ensuring cybersecurity is an extremely convoluted task as it requires a thorough knowledge about the attacks and the capability of analyzing the possibility of threats. The main challenge of cybersecurity is the progressive nature of the attacks. This paper presents the importance of cybersecurity as well as the various risks that are in the current digital world. The analysis was done on the cyber-attacks and their statistics show the intensity of the attacks. Various cybersecurity threats are presented with machine learning algorithms that can be applied to detect cyber-attacks.

100. Design And Analysis of 3 Phase Induction Motor Using Ansys Maxwell by Prof. Dr. D.M. Sonje, Yash N Bangali

Design and analysis of 3 phase induction motor using Ansys Maxwell

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It is evident that an induction motor is very reliable, robust and efficient machine used for various industrial applications under various loading conditions. Induction motors are cheaper in cost, rugged in construction and require very little maintenance. This paper focuses on performance aspects and censorious fields in the design of such a machine. A similar reference laboratory motor has been taken into account for designing of a motor. Therefore, by using ANSYS, a three phase 50Hz 430V 1.1KW motor have been designed. Once the designing of a 2-pole motor is done; its behavior has been studied. The tools used for this design and analysis are ANSYS Maxwell 2D and RMxprt. RMxprt is instrumental in not only giving classical motor performance parameters, but also spawns an outright transfer of the 3D or 2D geometry in conjunction with all electrical as well as electromagnetic properties. The conclusions retrieved are conferred and presumptions are drawn.

101. Case Study of Covid-19 Waste Management in Indian Context by YashSalunkhe, ShrutiYeole, SwayamGundawar,NehaKangle, Riddhi Wade, MrunmaiRanade

Case study of Covid-19 waste management in Indian Context

Yash Salunkhe[1], Shruti Yeole[2], Swayam Gundawar[3], Neha Kangle[4], Riddhi Wade[5], Mrunmai Ranade[6]

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The recent covid-19 pandemic due to the outbreak of coronavirus raised the demand for medical services and personal protective equipment, which leads to an increase in covid 19 waste rapidly. Designing systematic and reliable policies in this situation can help to control the spread of the coronavirus. The objectives of this study were: To assess the waste handling and treatment system of covid-19 related waste and its mandatory compliance with rules of WHO and the Indian government, and to quantitatively estimate the amount of covid waste generated in the country along with few numbers of covid waste generation in major states. During this study, it was observed that: the doctors and other staff members are trained to take adequate precautionary measures in handling these covid waste materials, the process of collection, segregation, transport, storage, and final disposal of such waste is done in compliance with the guidelines of AIIMS, and the final disposal is done by the process of incineration. The government has also given instructions to set up temporary incineration plants if the amount of waste exceeds the capacity of CBWTF incinerators. This paper discusses the different covid-19 waste management strategies practiced in India. It even discusses challenges faced during this management and the possible solutions for overcoming these challenges. It also provides useful insights into COVID-19 waste management scenarios during the COVID-19 pandemic and a possible way forward.

102. Case Study on Cotton Textile Waste Management by KaushikiKulkarni, Anand Ayyanagoudar, Maithili Karande, MrunmaiRanade

Case Study on Cotton Textile Waste Management

Kaushiki Kulkarni[1], Anand Ayyanagoudar[2], Maithili Karande[3], Mrunmai Ranade[4]

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Our paper focuses on Cotton textile industry and its sustainability. The Objectives of this work is to know about how to manage the waste produced during the production of cotton, to spread the awareness of adverse effect of cotton wastage and fashion on environment, to study the composition and management of cotton that is used in abundance in daily fashion, to take some measures to reduce the waste produced and to focus on recycling the waste produced. Some of our observations during this study are Cloths which used daily contribute roughly 1/5th of water pollution and even adverse the condition of air and landfill pollution. Among the total usage of all kind's fabrics like rayon, polyester, nylon etc. Cotton contributes 65% of this usage. Due to presence of other wastage like e-wastes, plastics etc. People pay very less attention to the most significant waste, "Textile/Cotton Waste". Also studied varies steps to achieve goal of reducing this cotton waste like, to find out the composition of waste produced, different ways to dispose the waste produced in cotton industry, recycle the fabric as far as possible.

103.A Study of Employee Satisfaction Towards Welfare Facilities at Unnati Associates by Dr. MeetaMeshram, Prof. DinkarHajare, Ms. Varsha Gore

A Study of Employee Satisfaction towards Welfare Facilities at Unnati Associates

Dr. Meeta Meshram[1], Prof. Dinkar Hajare[2], Ms. Varsha Gore[3]
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Today for the growth of the organization employee satisfaction is considered as one of the main aspects. Organizations have to ensure that employee satisfaction is high among the workers, which is important for Customer satisfaction and productivity. Satisfaction states the level of happiness of employees in their job and working environment. It is one of the major components of measuring the organizational success. This study observes the level of between employee satisfaction and facilities provided by the organizational to attain success. In this paper various variables responsible directly and indirectly for employee satisfaction has been discussed. This research paper also deals with different policies of improving employee satisfaction. Employee satisfaction become extremely necessary as it plays an important role key in the growth of the organization. This was collected through questioner which was open ended and multiple-choice questions.

104.A Study of Human Resource Management and Role of Technology in Human Resource Management by Dr. RajendraJadhav

A study of Human resource Management and role of technology in Human resource Management

Dr. Rajendra Jadhav
BVDUIMK, BVDU, INDIA

Human Resource Management (HRM) is the sector of business institution that handles the responsibilities like hiring employees, managing staff, their salary and many other relevant things in the organization. This division basically works to select the people who are capable for delivering the best work in the business industry. In this paper, going to focus on several important points comes under HRM. The paper includes following contents. HRM is discussed in brief, HRM role in business organization, HR and Technology, Impact of Covid-19 on HRM, Opportunities in HR functions after Covid-19, Motivational Aspects in Lockdown Period.

105.Study The Consumer Interaction in FMCG Product Through the Voice Search Technology by Dr. Reshma R. Kabugade, Dr. Santosh Gore, Prof. AvinashDandavate

Study the Consumer Interaction in FMCG product through the Voice Search Technology

Dr. Reshma R. Kabugade[1], Dr. Santosh Gore[2], Prof. Avinash Dandavate[3]

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Research article name is "study the consumer interaction in FMCG product through the voice search technology" the aim was to understand the voice search technology and know the various types of the voice search technology even to know the types of stores where this kind of technology is used. The main objectives of the study are to see the effects of voice search technology in order to identify the customer interaction with the FMCG product, to know what exactly stores opinion about this type of marketing technology. This research article focused on the voice search technology used for consumer interaction, identify various ways to interact with customer through voice search technology, to know the advantages and disadvantages of V.S.T. (voices search technology) while doing consumer interaction. The data collection was done by primary and observation method was the first method and second was questioner method was used the area sampling method was use to see the v.s.t. impact on the different stores and to check which type of voice search technology they use to see the customer interactions with the FMCG product.

106.A Study of Regulatory Frameworks of Mergers and Acquisition with Special Emphasis Over Indian Banking Sector by Dr. Roop Kishore, Ms. RupaBharti

A study of regulatory frameworks of mergers and acquisition with special emphasis over Indian Banking Sector

Dr. Roop Kishore[1], Ms. Rupa Bharti[2]
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Mergers and acquisitions (M&A) refer to the consolidation of companies or assets through various types of financial transactions, including consolidations, tender offers, purchase of assets, and management acquisitions. The term M&A also refers to the desks at financial institutions. Where many kinds of regulations lead by the government or corporate even time to time have to change according to the situations, government policy, environmental effects, world effects and the internal effects of the financial institutions. So, according to all these circumstances. So, in the banking industry is one of the prominent indicators of the well- being of an economy. Bank has ability and freedom to borrow money from other bank and lend to corporate has a great impact on the growth rate of the economy. The banking industry too has undergone several changes since the initiation of financial sector financial sector reforms in 1992. In this digital world the banking sector growing at a fast driven by booming economy but because of pandemic and non-performing assets (NPA) which gets down. but the new policies of government can change even new regulation made the great impact on the banking industry for foreign as well as India also. Here the several changes happened in this year like- RBI has mandated new rules for card payments to came into effects, blockchain, etc. The future of the banking industry looks more exciting with competitions intensifying which would lead to consolidation. Consolidation in the 25 Banking sector is very important in terms of mergers and acquisitions for the growing Indian Banking Industry. This can be achieved through Cost Reduction and Increasing Revenue. The important part over here is why do everyone need consolidation in Indian Banking and what is the Challenges Ahead. The role of the Central gov Ahead. The role of the Central government is also very necessary to be analysed in the entire process as they play a crucial role in the policy formation required for the growth of Indian Banking. In today's global marketplace, banking organizations have greatly expanded the scope and complexity of their activity and face an ever changing and increasingly complex regulatory environment. It has been realized globally that mergers and acquisition is the only way for gaining competitive advantage domestically and internationally and as such the whole range of industries are looking for strategic acquisitions within India and abroad.

107.A Study of Fundamental Skill Training Program Evaluation for Bargainable Operatives- Case Study of Tata Motors, Pune by Dr. SadhanaOgale, AnjumKhoja

A Study of Fundamental Skill Training Program Evaluation for Bargainable Operatives- Case Study of TATA Motors, Pune

Dr. Sadhana Ogale[1], Anjum Khoja[2]
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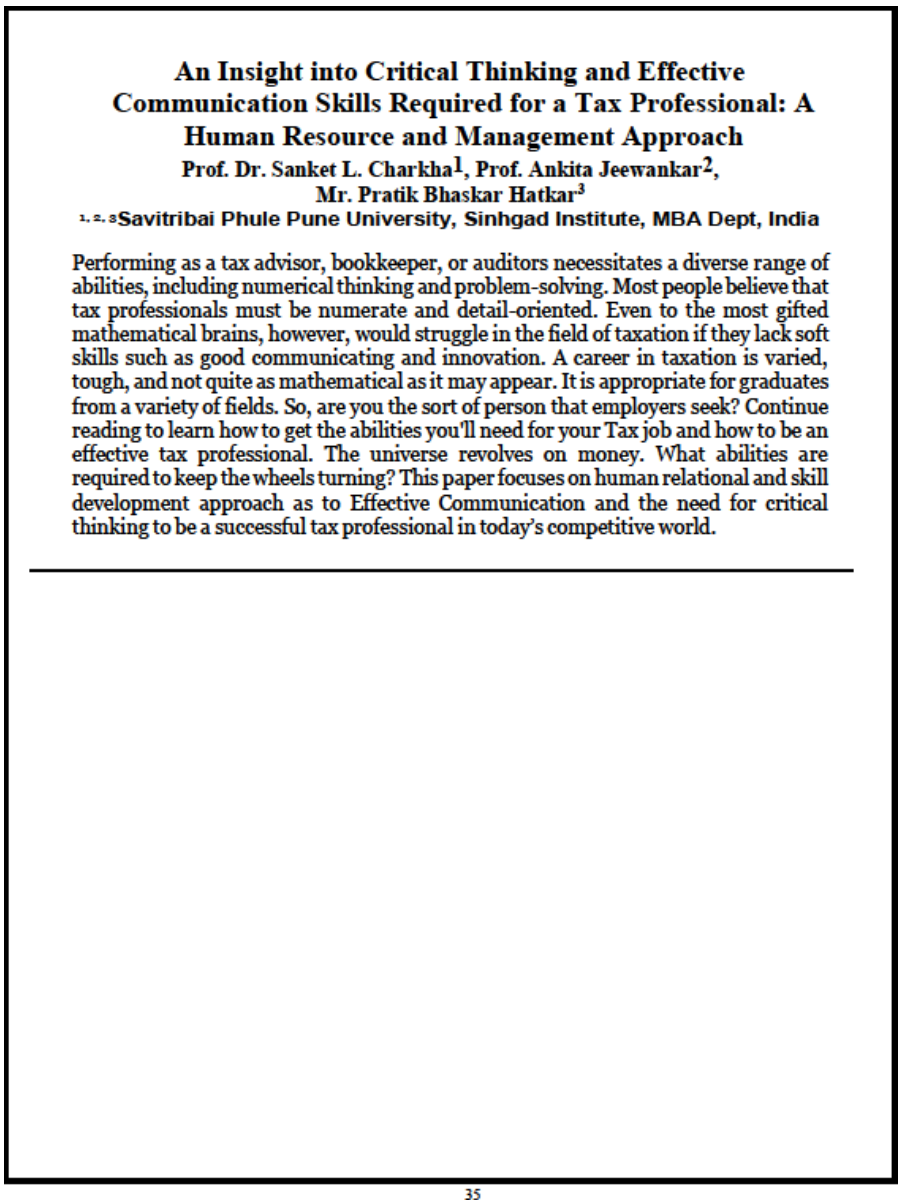
Training is process in which knowledge is delivering to the employees for the development of the organization. Training helps to improve quality of the work and productivity of the organization. It is a continuous process to impart specific skills to the set of employees. Present study focuses on FUNDAMENTAL SKILL TRAINING PROGRAM (FST Program) conducted at Tata Motors and employees' opinion about FST program. Data collected from 150 employees who attended the training program at TATA Motors.

108. An Insight into Critical Thinking and Effective Communication Skills Required for A Tax Professional: a Human Resource and Management Approach by Prof. Dr. Sanket L. Charkha, Prof. AnkitaJeewankar, Mr. Pratik BhaskarHatkar



An Insight into Critical Thinking and Effective Communication Skills Required for a Tax Professional: A Human Resource and Management Approach

Prof. Dr. Sanket L. Charkha[1], Prof. Ankita Jeewankar[2], Mr. Pratik Bhaskar Hatkar[3]

[1, 2, 3]Savitribai Phule Pune University, Sinhgad Institute, MBA Dept, India

Performing as a tax advisor, bookkeeper, or auditors necessitates a diverse range of abilities, including numerical thinking and problem-solving. Most people believe that tax professionals must be numerate and detail-oriented. Even to the most gifted mathematical brains, however, would struggle in the field of taxation if they lack soft skills such as good communicating and innovation. A career in taxation is varied, tough, and not quite as mathematical as it may appear. It is appropriate for graduates from a variety of fields. So, are you the sort of person that employers seek? Continue reading to learn how to get the abilities you'll need for your Tax job and how to be an effective tax professional. The universe revolves on money. What abilities are required to keep the wheels turning? This paper focuses on human relational and skill development approach as to Effective Communication and the need for critical thinking to be a successful tax professional in today's competitive world.

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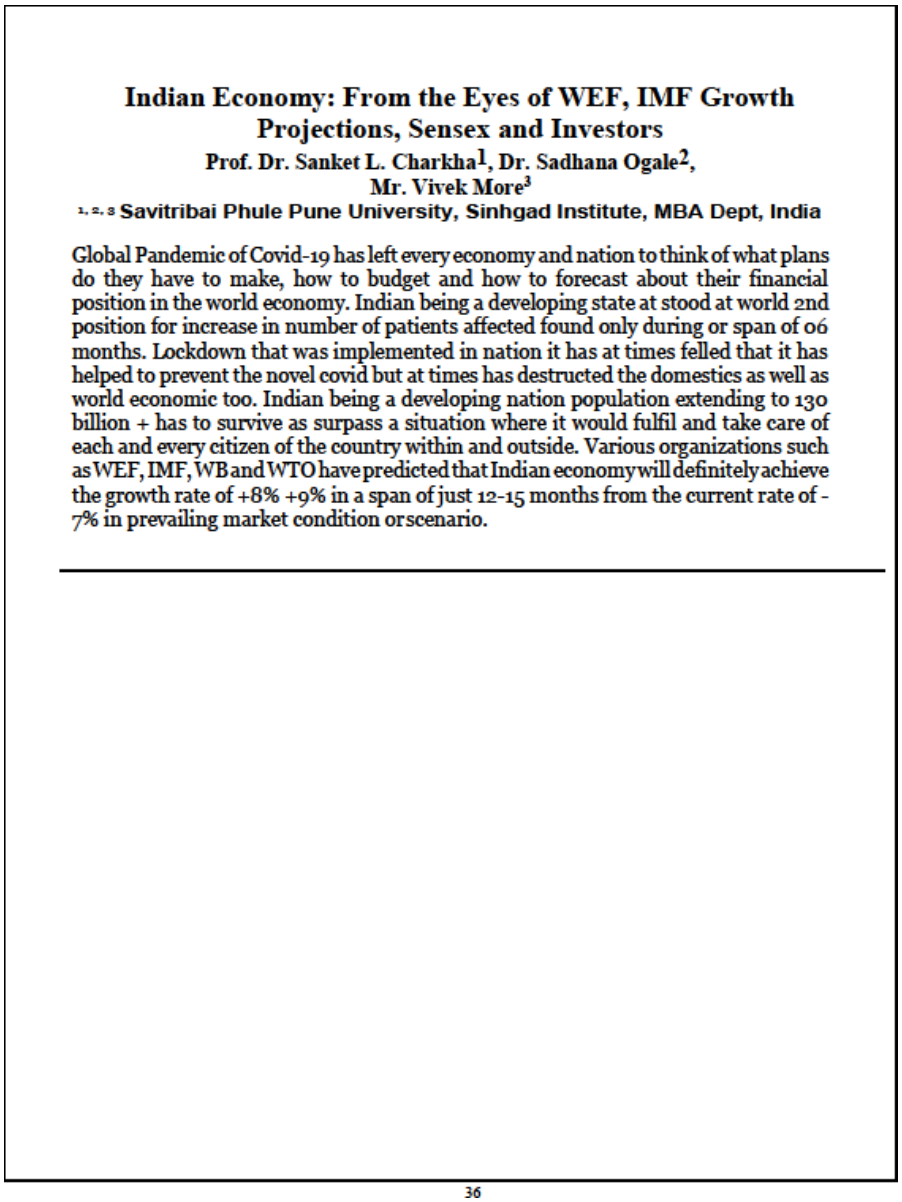
109. Indian Economy: From the Eyes of WEF, IMF Growth Projections, Sensex and Investors by Prof. Dr. Sanket L. Charkha, Dr. SadhanaOgale, Mr. Vivek More



Indian Economy: From the Eyes of WEF, IMF Growth Projections, Sensex and Investors

Prof. Dr. Sanket L. Charkha[1], Dr. Sadhana Ogale[2], Mr. Vivek More[3]

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Global Pandemic of Covid-19 has left every economy and nation to think of what plans do they have to make, how to budget and how to forecast about their financial position in the world economy. Indian being a developing state at stood at world 2nd position for increase in number of patients affected found only during or span of 06 months. Lockdown that was implemented in nation it has at times felled that it has helped to prevent the novel covid but at times has destructed the domestics as well as world economic too. Indian being a developing nation population extending to 130 billion + has to survive as surpass a situation where it would fulfil and take care of each and every citizen of the country within and outside. Various organizations such as WEF, IMF, WB and WTO have predicted that Indian economy will definitely achieve the growth rate of +8% +9% in a span of just 12-15 months from the current rate of -7% in prevailing market condition or scenario.

110.A Study on Technical Analysis for Granules Ltd.by Dr. Ujjwal Mishra, Sanket Sanjay Bajaj

A Study on Technical Analysis for Granules Ltd.

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Equity Analysis is the systematic study of the performance of companies in stock market with help of fundamental analysis and technical analysis. This study includes On Balance Volume, Relative Strength, Bollinger Band, Beta. Examine the relationship between the risk and returns of the Selected Scripts Data. In this research paper performance of Selected Company scripts has been investigated. Risk & returns of Selected scripts are investigated using different statistical tools for the last Six months has been presented. Taking risk & returns into account, the analysis suggests that investors after considering the certain aspect of the fund could invest in the better performing fund.

111.A Study On Online Teaching And Its Impact On Learning by Dr. Vaibhav Kale, Dr. AtulPise

A study on online teaching and its impact on learning

Dr. Vaibhav Kale[1], Dr. Atul Pise[2]
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[2]INDIRA, SPPU, INDIA

Due to some unavoidable circumstances colleges and universities should incorporate online teaching programs into their curriculum, it's important to know the advantages of online teaching, problems that particularly occur regarding participation i.e., face-to-face (f2f) teaching and learning processes. The aim of this study is to supply understanding of how the web teaching has impacts on thinking, understanding and implementation of concepts by the scholars. Online teaching should facilitate conditions that promote student in active learning. There are three trends for a control on the themes: A drastic shift focused from teaching and learning to active participation and hearing, Use of the of technology and media for its awareness and effectiveness and Attendance in classroom is extremely challenging

112.A Study On The Importance Of The Artificial Intelligence With Reference To It Companies by Dr. Vaibhav Kale, Ms. SamrudhiChavan, Mr.ShubhamWankhede

A study on the importance of the Artificial Intelligence with reference to IT companies

Dr. Vaibhav Kale[1], Ms. Samrudhi Chavan[2], Mr. Shubham Wankhede[3]
[1,2,3]**NBNSSOM, SPPU, INDIA**

AI refers to the simulation of human intelligence in machine that is programmed to think like humans & mimic their actions. Computing may be a broad field that encompasses various concepts within the field Information Technology (IT). This research paper focuses on the various technologies in AI & how they apply to enhance the performance of the multiple sectors. The aim of this study is to debate the utilization of AI & its present & future applications. AI is that the foundation of multiple concepts likes machine learning, Computing, Software creation & data transmission. The technologies that AI uses are linguistic communication generation, Speech recognition, AI optimized hardware, Machine learning platforms, Virtual Agents, Decision Management, Deep learning platforms & Biometrics. The cloud & AI can blend perfectly in diverse ways & consistent with experts, AI might just be the technology to revolutionize cloud computing solutions. AI as a service improves the prevailing cloud computing solutions & engenders new paths to the event. AI is applied to several sectors like healthcare sector, assembling & manufacturing industries & industry. AI has various advantages. AI also run up with multiple problems that undermine its application. The increased use of AI has transformed various sectors by boosting organizations performance & facilitating information system.

113.Corporate Social Responsibility and Financial Performance: AStudy on Public Sector CSR Companies in India by Prof. GeetabalaLendhare, Prof. JyotiBorde

Corporate Social Responsibility and Financial Performance: A Study on Public Sector CSR Companies in India

Prof. Geetabala Lendhare[1], Prof. Jyoti Borde[2]
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There is one and only one responsibility of business to remain and stays within games rule is to use its resources and engage in activities designed to increase its profit (Milton Friedman). In April 2014 with the amendment in the company's ACT 2013 India become the first country to make corporate social responsibility mandatory. The main objective of the study is to study the effectiveness of Companies Act 2013 with respect to corporate social responsibility and scrutinize its impact on financial performance of some selected public sector CSR companies in India. Secondary data has been collected for the 10 public sector CSR companies in India for a period of five year from 2014-15 to 2018-19. The study shows that most of the selected public sector companies have average contribution is more or equal to2% of their average profit towards CSR also it is compliance the rule of company act 2013 with respect to CSR contribution. The study shows that there is positive impact on financial performance of the selected public sector companies due to the contribution towards CSR, it depicts that the financial performance of the company increases with the increased CSR contribution. The finding of this study provides the perception toward CSR so that it can be helpful to integrate and renovate the business philosophy with strategic intention from traditional profit-oriented approach to socially responsible approach.

114.A Study of Financial Operations with Reference to Selected Automobile Sector in Pune City by Mrs. JyotiVipulHowale-Shinde, Mr. Sariputra Dipak Kalpande

A Study of Financial Operations with reference to Selected Automobile Sector in Pune City

Mrs. Jyoti Vipul Howale-Shinde[1], Mr. Sariputra Dipak Kalpande[2]
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In today's business process standardization is essential for the smooth flow of corporate processes. The ability to obtain information with a single click demonstrates the organization's transparency, standardization, accuracy, and punctuality. In today's digital age, thinking about business development isn't enough; the integration component is crucial. Need to focus on time management in today's extremely competitive business climate by employing various tools, strategies, and software such as ERP SAP, Oracle, Tally, KSRM, and so on. Working capital is one of the most significant aspects of a company's financial operations. Organizations must look at more effective ways to handle working capital, which includes accounts receivable, payables, and inventories. And standardize the procedures for the same. The procedures of procurement to payment, order to cash, and record to report serve to improve productivity, integrity, and reporting.