SOUVENIR ON

RECENT TRENDS IN SCIENCE, ENGINEERING *and* MANAGEMENT

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ESHAN COLLEGE OF ENGINEERING
FARAH, MATHURA

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ABOUT THE COLLEGE:

Eshan College of Engineering serves students who are interested to pursue their career in Engineering. It was established with the aim to constantly develop the excellence of education, to raise the aptitude of our students, to facilitate & to embark upon a successful career. It not just caters the academic excellence but also empowers its students with immense exposure, qualified pedagogy, excursions, competitions, internships, live projects and extracurricular activities. It believes in holistic development of its students rather than a one dimensional development.

Eshan has a history of academic excellence and ranks among the top colleges. Known for world-class research, global community, and industry connect, our reputation attracts the best and bravest of thinkers who constantly cross boundaries, creating a home for leaders of tomorrow.

ABOUT THE CONFERENCE:

Conference on Recent Trends in Science, Engineering and Management (RTSEM–2022) aims to bring together academicians, industrialists, research scholars to exchange and share their experiences and hard-earned technological advancements and applications in Science, Technology and Management. The sub theme of the conference are the emerging interdisciplinary areas where a wide range of theories, methodologies and algorithms are explored to analyze or to solve complex challenging real-world problems.

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- Mr. Vinay Gupta, Eshan College of Management, Mathura
- Ms. B. Sumbul, T&P Head, Eshan College of Management, Mathura

MESSAGE FROM MANAGING TRUSTEE

It provides me a thought of pleasure as a managing trustee as I was made aware of the fact that Eshan College of Engineering is going to organize a national conference on recent trends in science, engineering and management (RTSEM-2022). I am eager to extend my benevolent hand by any means to the organizers and team of RTSEM – 2022. My best wishes and greetings on the occasion of organizing the conference.

Manjari Agarwal
Managing Trustee
Eshan College of Engineering, Mathura

MESSAGE FROM CHAIRMAN

I feel elated to hear that Computer Science and Engineering department of Eshan College of Engineering is planning to organize national conference on recent trends in Science, Engineering and Management (RTSEM-2022). This is definitely a moment for all of us in Eshan family which gives a motivational rush of thoughts through our minds as scholars and researchers are being provided the platform to present their long term research work on board. This opportunity will help in brushing the young minds and interact with their counter parts and share their experiences for the good self of our society.

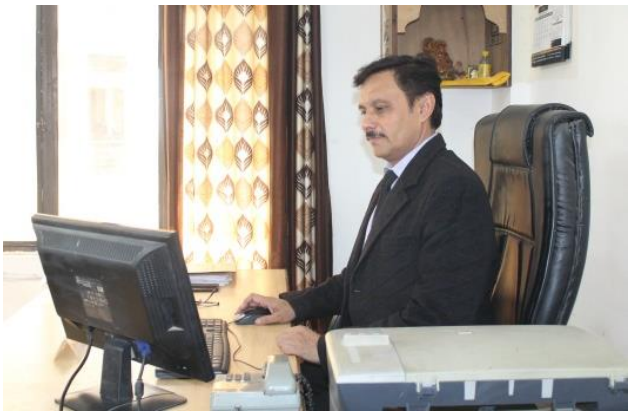
I present my best wishes and greetings to the organizers so that this conference becomes a great success all round.

CA Saksham Agarwal

Chairman

Eshan College of Engineering, Mathura

DIRECTOR'S MESSAGE



It is a matter of proud and satisfaction that Eshan College of Engineering, Mathura is organizing National Conference on "Recent Trends in Science, Engineering and Management" (RTSEM-2022) on 09th June, 2022. It will provide an opportunity to the scholars and researchers to present ideas on recent technological and management advancements. Technology has become the indispensible part of Human life. Advancement to the technology is always required and this motto can be fulfilled by encouraging research activities.

In the words of Zora Neale Hurston "Research is formalized curiosity. It is poking and prying with a purpose." To become the research useful to the society it must always have affirmative intentions. I hope this conference will not only explore the research area related to Science, Engineering and Management but also satisfy the zeal of the participants.

My best wishes to the organizing committee of the conference.

Dr. Pankaj Sharma
Director
Eshan College of Engineering, Mathura

FROM THE DESK OF DEAN ACADEMICS

Eshan College of Engineering takes proud and humbled at the conduction of one day National conference on the topic of "Recent trends in Science, Engineering & Management" (RTSEM-2022) on 09th June 2022. We all know the importance of science and technology in every aspects of life. Relationship with technology will deepen as larger segments of the population come to rely more on digital connections for work, education, health care, daily commercial transactions and essential social interactions. At the same time equally important is that the technology should not disturb our ecological balance. It is hope that this conference will focus on these aspects. I wish a grand success of the conference.

R. K. Vishwakarma
Dean Academics
Eshan College of Engineering, Mathura

FROM THE DESK OF DEAN R&D

Dear Delegates,

It is a matter of extreme pleasure and honour for me to get an opportunity to express my views on the vitality of "National Conference on Recent Trends in Science, Engineering and management (RTSEM-2022) organized by Department of CSE under the guidance of Research and Development Department, Eshan College of Engineering, to be held on 9th June, 2022.

This National conference focuses on channelizing the most impactful aspects of the corporate world posing challenges for smooth organizational operations. Through precise research work authored by professionals, research enthusiasts and business experts, we are attempting to ensure applicable solutions and discerning unforeseen circumstances.

For the uncertainties that are attenuated with the most fundamental business operations, Phil Knight posits that one should play by the rules but be ferocious. With that thought, I would like to wish my team and faculty of our college good luck hoping for a successful conference and all future endeavours.

Thanks to one and all.

Dr. Faize Ali Shah

Dean R&D and Conference organizing Secretary

Eshan College of Engineering, Mathura

MESSAGE FROM CONVENER

I am glad and honoured at the same time that Department of Computer Science & Engineering of Eshan College of Engineering, Mathura, the pioneer institute of the region, is going to embark one more achievement in the form of National Conference on 09th June, 2022.

The contribution of technology and management in the society cannot be left out in the cold. The topic "Recent Trends in Science, Engineering and Management" is a diversified one that will not only allow researchers from different fields to meet and share their views but also explore the multidisciplinary research. Science & Technology plays an important role in various business domains in the form of various tools for big data analytics, search engine optimization, green computing etc. I hope the Conference will achieve its objective to motivate researchers and research scholars to contribute in quality research work.

Best wishes to the organizing team for making the conference a grand success.

Vyom Kulshreshtha
HOD CSE & Conference Convener
Eshan College of Engineering, Mathura

WISHES FOR CONFERENCE

It provides me immense pleasure to get aware about that Eshan College of Engineering is organizing a national conference on recent trends in science, engineering and management (RTSEM-2022). As it is already a well-known fact that systems approach for problem solving is very common and popular approach nowadays. Systems approach has been applied and will continue to be applied in various spherical dimensions of science, engineering and management. This national conference will definitely provide a platform to research scholars, students and faculty members to present their ideas/work in all the three dimensions (Science, engineering and management). Through this conference have been planned over to give opportunity in general to all fields of scientific researches but definitely this conference will give a fruitful result contributing towards the welfare of human kind.

I heartily extend my greetings and best wishes to the organizers and management for the grand success of the event.

Dr. R.S. Rao
Head of Office
Netaji Subhas University of Technology, New Delhi

WISHES FOR CONFERENCE

Pride for all of us, academicians and scholars, to apprise about the fact that Eshan College of Engineering is orgainsing a conference on national basis on recent trends in science, engineering and management (RTSEM-2022). Passing through the pandemic (COVID-19), it is need of an hour and well known requirement that our researchers (young as well as experienced) to stand and take the change of realization of atmanirbhar nation. This conference is definitely an appropriate step towards this direction of self-dependency. Engineering, as they say, is the application of laws of nature and basic sciences for the welfare of human society. This conference is a right call to wake up and continue to ponder our contribution in this direction. I wish all the very best of success to the team behind this venture.

Dr. Punit Kumar
Professor, Department of Mechanical Engineering
NIT, Kurukshetra, Haryana

SPEAKER'S THOUGHTS

Decision making is the key to success in every field. Our actions based on right decisions assure the fruitful results. Accurate prediction plays an important role in making right decisions. The accuracy of prediction depends on many hidden parameters. Machine learning is the tool to explore those hidden parameters to generate accurate outcomes without explicitly program the system. Machine learning gives us a way to process historical data and generate new outcomes.

Machines are becoming more intelligent day by day. Their increased capabilities are allowing having less human intervention. Every sector and industry has been influenced by the technology and looking for the advancement and automation. With the tools like regression and classification machine learning is providing strength to the industries in making appropriate decisions.

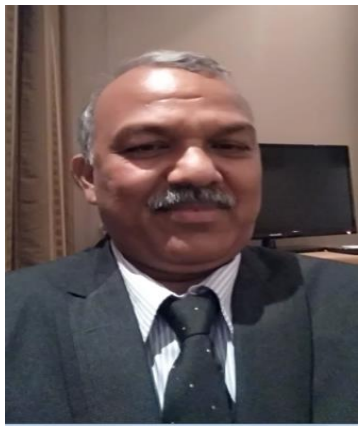
Machine learning has not only been intensively used in technological applications such as E-mail filtering, Search Engines, unusual transaction detection, voice recognition system but also becoming popularized in Banking, Tourism, Education, Healthcare and Entertainment as personalized recommendation systems and chatbots.

Deep learning is the advancement of machine learning with multiple hidden layers in the neural networks. In association with technologies like computer vision, Natural Language Processing It is widely used in applications that require human-like intelligence such as Autonomous vehicles, fraud detection systems, sentiment analysis, customer relationship management, and virtual assistant.

Explainable AI and Federated AI are the future of the AI Technology. It's a challenge to maintain the user privacy and data security while providing collaborative environments and customized services. So it's a double edged sword that should be handled carefully.

Dr. M. P. Singh
Professor & Head
Department of Computer Science & Engineering,
Institute of Engineering & Technology,
Dr. Bhimrao Ambedkar University, Agra

SPEAKER'S THOUGHTS



Computational Intelligence is a form of computing modeled on the methods by which humans learn. The three pillars on which computational intelligence rely are Neural Networks, Fuzzy Logic and Genetic Algorithms. In its combined form these three domains are also known as Soft Computing. The interesting fact about computational intelligence is that it can utilize incomplete, vague or inexact information to derive the conclusions.

Computational Intelligence is a subset of Artificial Intelligence and share a similar long-term goal: reach general intelligence; the intelligence of a machine that could perform any intellectual task that a human being can. There are two types of machine intelligence: the artificial one based on hard computing techniques and the computational one based on soft computing methods, which enable adaptation to many situations. Even it is not guaranteed that the solution provided by the computationally intelligent methods will be the best among all the existing solution, it is ensured that we will get good results in least computational time. Clearly computational intelligence provides flexibility that makes it suitable to solve many daily problems of life. The solutions offered by computational intelligence are inspired by the nature. Digital assistants, like Alexa and Siri, have Natural Language Processing capabilities which make it possible to interact with the machine directly.

Probabilistic methods and learning theory provides strength to the machines in developing intelligence. Evolutionary methods such as Particle Swarm Optimization,

MOPSO and PROMETHEE find the concise solutions to problems like Travelling Salesman.

Computational Intelligence can be integrated with various interdisciplinary domains such as Human Sciences, Law Enforcement, and Social Sciences etc. to be purposeful as it can find better solution for improving the life style. To serve for the betterment of mankind is possible through the advancement of Computational Intelligence.

Dr. Daya Krishan Lobiyal
Professor,
School of Computer and Systems Sciences
Jawaharlal Nehru University, New Delhi

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BRAIN TUMOR DETECTION USING CONVOLUTIONAL NEURAL NETWORK

Rajit Kumar Chauhan, B.Tech Scholar, Department of CSE, Eshan College of Engineering, Mathura, Uttar Pradesh

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Arti Sharma, B.Tech Scholar, Department of CSE, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

A brain tumor is regarded as one of the most competitive diseases among children and adults. The majority of number one Central Nervous System (CNS) malignancies are brain tumors, which account for 85 to 90% of all CNS tumors. Approximately 11,700 patients are diagnosed with a brain tumor each year. Humans with a malignant mind or CNS tumor have a 5-year survival rate of around 34 percent for men and 36 percent for women. There are three types of brain tumors: start tumor, middle tumor, and end tumor. Malignant Tumor, for example, requires proper treatment, planning, and diagnostics in order to improve the patients' life expectancy. Magnetic Resonance Imaging (MRI) is a great way to detect brain cancers (MRI). The scans generate a vast amount of picture data. These images are examined with the help of a radiologist. Because of the intricacies involved in brain tumors and their treatment, a guide exam may be prone to errors. Machine Learning (ML) and Artificial Intelligence (AI) have always outperformed guide category in the use of computerized category tactics. As a result, Image Classification may be valuable to medical physicians all over the world by providing device acting detection and classification using Deep Learning Algorithms such as Convolution-Neural-Network (CNN), Artificial Neural Network (ANN).

A REVIEW OF TEXT MINING METHODOLOGIES IN DIFFERENT AREAS

Priyanka Asthana, Assistant Professor, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Shiva Gupta, Assistant Professor, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Kuldeep Singh, Assistant Professor, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

Text mining is basically used to extricate the hidden information from structured and semi-structured data. Text mining is also known as text-analytics it uses the NLP Algorithm to transform the unstructured text data in a normalized manner. It is the process of exploring huge amount of unstructured text data. In future the amount of text data will increase very rapidly. We present the different terminology that is basically used in data mining and also discuss about algorithm that is basically used in data mining and also discuss the comparison of techniques on the basis of its attributes and models. The need of automatically retrieval of useful knowledge from the large amount of textual data in order to assist the human analysis is fully apparent.

DEEP LEARNING-BASED DETECTION OF PENETRATION FROM WELD POOL REFLECTION IMAGES

Naveen Katara, Assistant Professor, Faculty at the Department of Mechanical Engineering, R.B. Gautam Polytechnic, Hathras

Abstract-

An innovative method was proposed to determine weld joint penetration using machine learning techniques. In our approach, the dot-structured laser images reflected from an oscillating weld pool surface were captured. Experienced welders typically evaluate the weld penetration status based on this reflected laser pattern. To overcome the challenges in identifying features and accurately processing the images using conventional machine vision algorithms, we proposed the use the raw images without any processing as the input to a convolutional neural network (CNN). The labels needed to train the CNN were the measured weld penetration states, obtained from the images on the backside of the workpiece as a set of discrete weld penetration categories. The raw data, images, and penetration state were generated from extensive experiments using an automated robotic gas tungsten arc welding process. Data augmentation was performed to enhance the robustness of the trained network, which led to 270,000 training examples, 45,000 validation examples, and 45,000 test examples. A six-layer convolutional neural network trained with a modified mini-batch gradient descent method led to a final testing accuracy of 90.7%. A voting mechanism based on three continuous images increased the classification accuracy to 97.6%.

DESIGN AND MODELING OF ELECTRICAL MACHINE FOR CEILING FAN SYSTEM

Rinku Chandra, Associate Professor, Department of Electrical Engineering, R.B. Gautam Polytechnic, Hathras, Uttar Pradesh

Abstract-

The purpose of this research is to conduct an empirical research to design the electrical machine of a ceiling fan system purposely to generate additional electrical power. The conventional single-phase ceiling fan using an induction motor has a lower 30% efficiency. In addition, the wasted kinetic energy from the mechanical rotor rotation can be converted from mechanical energy to electrical energy. Literature review on topologies of an electrical machine, ceiling fan technologies, previous research on ceiling fan and air gap configurations was systematically analyse in order to obtain the optimum proposed designs configuration. In this research, the permanent magnet machine configuration was selected to propose two designs of ceiling fan machine. The newly introduced design concept in this study is the use of concept single rotor double stator that combining the motor and generator in one system. In this research, Finite Element Analysis (FEA) has been performed to justify and to compare the outcome of the proposed designs using the An soft Maxwell software by analysing the induced voltage, flux linkage, flux distribution and air gap flux density. The selected optimized design will be used to develop a prototype for validating the procedure between the simulation result and experimental result. The testing of the prototype will be conducted experimentally to validate the output with the conventional ceiling fan in terms of output power, efficiency and speed.

COMPARATIVE ANALYSIS OF SAAS, IAAS AND PAAS

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Divyanshi Pal, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering Mathura, Uttar Pradesh

Purnima, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering Mathura, Uttar Pradesh

Shiva Gupta, Assistant Professor, Department of Computer Science, Eshan College of Engineering Mathura, Uttar Pradesh

Abstract-

Cloud computing basically changes the expectations of how computer, storage and network resources should be shared, managed and used. End users are increasingly sensitive to delays in the services they use. Service Engineers require Service Providers to verify or enable resource allocation and flexibility of need patterns in real time. Finally, Service Providers are under pressure to design their own infrastructure to enable real-time end-to-end visibility and robust service management with strict controls to reduce the total cost of ownership while and improve speed. Cloud provides almost endless flexibility and expansion of external computer and processing services that not only provide significant cost benefits, but also provide the ability to communicate with customers, and providers in an unprecedented way.

SMART MIRROR FOR AMBIENT HOME ENVIRONMENT

Shivam Garg, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Shivam Goswami, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Er. Shiva Gupta, Assistant Professor, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

This research examines the smart mirror's design, construction, and functionality. Before leaving our houses, we examine ourselves in the mirror at least once every day. We leverage it psychologically to influence our appearance and attire. One of the Raspberry Pi's applications is the Smart Mirror, often known as the Magic Mirror. It appears that a computer screen embedded in a mirror is futuristic. The Raspberry Pi runs in the background, controlling the data displayed on the mirror. The user can view notifications from social media sites, news, weather forecasts, and much more while staring in the mirror. Voice commands may be used to control household appliances using these mirrors. The monitor is attached to the Raspberry Pi as well as HDMI as well as it also features built-in Wi-fi and Bluetooth interfaces, so we can simply swipe to mirror music and videos.

HYBRID MOVIE RECOMMENDATION SYSTEM

Muskan Gupta, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Kulbhushan Singh, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Abdhesh Kumar, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Shreya Chaturvedi, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Versha Shakya, B.Tech Scholar, Department of Computer Science & Engineering, Mathura, Uttar Pradesh

Abstract-

Today, recommendation system is used in our daily life. However, they are far from perfect. In this project, we will try to understand various types of recommender systems by comparing their results with other datasets. We will develop a scalable model to perform statistics. We start by developing and comparing different types of prototypes on a smaller dataset of 1000 reviews. Then we try to evaluate the system so that it can handle 200 reviews using MS SQL server. We learned it to have a concise data set, the implementation of user-based collaborative filtering results with better output and efficiency. A recommendation system is an information filtering tool that wants to predict the ratings of users and articles, mainly from big data, to suggest their likes. The movie recommendation system provides a mechanism for users to rate users with similar interests. This makes the referral system a core part of e-commerce websites and apps. This article focuses on movie recommender systems with the main objective of proposing a recommender system through data clustering and computational intelligence.

A NOVEL APPROACH FOR IMAGE SEGMENTATION USING SWARM INTELLIGENCE

Ravendra Singh, Research Scholar, IFTM University, Moradabad

Dr. Bharat Bhushan Agarwal, IFTM University, Moradabad

Abstract-

In image analysis, segmentation is one of vital pre-processing technique. Brain tumor segmentation is a challenging task because of its abnormal anatomy structure. Due to the techniques of magnetic resonance imaging a number of images are scanned and captured the internal part of brain but still it is a problem for identifying tumor in the field of medical science. In this process of segmentation, obtaining optimum threshold values is done by pioneer method, namely Otsu's. The objective function of this method is calculated using Cuckoo-McCulloch method with levy flight for its accuracy and computational time. We have proposed an efficient algorithm, incorporating McCulloch's method for levy-flight generation which is computationally efficient image segmentation algorithm. The performance of efficient CS is also compared with Mantegna's method. The overall-performance of an efficient CS algorithm is compared and discussed with other popular method. An efficient CS method is prominent and computationally efficient for magnetic resonance imaging.

INTERNET OF THINGS BASED SMART PARKING SYSTEM

Arshad Khan, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Harsh Varlani, B.Tech Scholar, Department of Computer Science & Engineering,Eshan College of Engineering, Mathura, Uttar Pradesh

Chaudhary Alisha, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Er. Shiva Gupta, Assistant Professor, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

With the tremendous growth in the population of major cities, the number of automobiles has grown in lockstep. People opt for private transportation than public transportation as this is comfortable and easier resulting in an increase in vehicle numbers. As a result, looking for a vacant place becomes time-consuming, resulting in numerous issues such as higher fuel, time, and power use. The Internet of Things (IoT) has made remarkable progress and opened up a new range of technologies that were previously deemed science fiction. IoT comes to our rescue since it holds all the capabilities to boost any industry. By employing IoT and addressing difficulties like traffic congestion, limited car parking facilities, and other issues, giant cities or those metropolitan cities are all set to become smart cities and achieve grand feats in all aspects including smart parking. In this study, we look at some recent research papers on IoT-based smart parking that were published between 2018 and 2019. Different models enhanced with sensors, integrating cloud and mobile applications are described in their

investigations, resulting in a smart parking system that saves time, energy, gasoline, and thus carbon footprint. Disabled people are often overlooked in systems, and there is currently no universal parking option. The rapid shrinkage and resilience of processors, sensors, and machine learning coupled increased the prospect of a smart and single international solution for future researchers to handle parking dilemmas in both inside and outside parking areas. A smartphone application is also designed in a manner that users can avail to check the status of their orders.

SENTIMENT ANALYSIS BY OBSERVING FACIAL EXPRESSION

Saurabh Kumar, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Raukad Singh, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Himanshu Sharma, Assistant Professor, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

A facial expression is a visual expression of a person's emotional state, reasoning activity, intention, personality and psychology and plays a communicative role in interpersonal relationships. Automatic recognition of facial expressions can be an important component of natural human-machine interfaces; It can also be used in behavioral science and clinical practice. An intuitive facial expression recognition system requires face detection and location in a convolutional scene, facial feature extraction, and facial expression classification. These human facial expressions convey a lot of information visually rather than fluently. Facial expression recognition plays an important role in the field of human-machine interaction. Programmed facial expression recognition systems have many applications with incomplete, human behavioral understanding, detection of mental disorders, and synthetic human expressions. Recognition of facial expressions by computers with high recognition rates is still a challenging task. The facial expression recognition system is implemented using a convolutional neural network (CNN). The CNN model of the project is based on the Lenet design.

The Kaggle facial expression dataset labeled seven facial expressions as happy, sad, surprise, fear, anger, disgust and neutral is used in this project. The system achieved 56.77% accuracy and 0.57 accuracy on the test dataset.

A SURVEY ON DATA MINING TECHNIQUES AND ALGORITHMS

Shishupal, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Himanshu Singh, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Prashansa Kulshreshtha, B.Tech Scholar, Department of Computer Science & Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Priyanka Asthana, Assistant Professor, Department of Computer Science, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

While data mining has grown rapidly in recent times, the lack of data has remained a major challenge. In data mining, the main task is to categorize and summarize a large number of different types of data. In real-world data mining is used to generate huge growth within the field of all kinds of applications in the software field. Data mining is a process of extracting Healthcare, Educational, and Business useful data from large databases by using data mining algorithms and techniques. Data mining techniques have been used to improve performance in Healthcare, Educational, and Business areas by extracting unknown and applying data mining algorithms.

Using data mining, you can find out information about data and present it in a more understandable format to humans and use data. The motive of this review paper is to introduce the study of classification techniques based on algorithms used to analyze large data sets to make future predictions in the healthcare industry. A comparison of ensemble learning techniques by using base classifiers is presented in this paper, which examines various ensemble learning techniques such as boosting and bagging.

SKIN CANCER DETECTION USING IMAGE PROCESSING

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Abstract-

We suggest how to diagnose melanoma skin cancer with Otsu thresholding that separates the wound throughout the image. A border tracking algorithm has been used to separate additional components. After removing the features from the wound, the Stolz algorithm was applied to the partition phase. The findings are displayed in the form of statistical tables and graphs.. The test result shows that the proposed algorithm performs well in detecting different stages of skin cancer.

DESIGN OF BROADBAND MICROSTRIP ANTENNA FOR WLAN/WIMAX/GPS APPLICATION

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Abstract-

A simple electromagnetically coupled broadband printed microstrip antenna suitable for multifunctional wireless communication bands is presented. Both impedance and radiation characteristics of proposed antenna are studied. The proposed antenna has wide bandwidth of 63.07% covering the range of frequency 1.423-2.734 GHz. The simulated characteristics of the antenna along with the 3D radiation patterns and gain, are presented and discussed by using IE3D simulation software.

DESIGN OF FUZZY PID CONTROLLER OPTIMIZED BY INTERCONNECTED POWER SYSTEM

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R. S. Pathak, H.O.D, Department of Electrical Engineering, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

This paper is validated the multi inputs (two inputs) fuzzy PID (MIFPID) controller as Automatic generation control (AGC) over the single input FPID (SIFPID) controller for a two area interconnected power system. The objective function is formulated by concerning undershoot, overshoot, and settling time of frequency and tie-line power deviation of the power system by implementing SIFPID and MIFPID controllers individually as AGC in each area. Modification of Group Hunting search optimization (MGHS) is proposed to optimize the gain parameters of controllers to minimize the multi-objective problem with constraint. All the performances of these controllers as AGC are examined by implementing a load disturbance of 1% (0.01 p.u.) in area-1. Finally, MIFPID controller optimized by MGHS algorithm contributes better performance in the proposed system.

APPLICATION BASED REDUCED ORDER MODELLING OF LTI SYSTEMS

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Abstract-

The present work deals with application of Whale Optimization Algorithm (WOA) in reduced order modelling (ROM) of higher order linear time invariant (LTI) systems. WOA has been employed to minimize the integral square error (ISE) in between transient responses of high order system (HOS) and low order system (LOS) for obtaining all the unknown parameters of LOS. Two systems of different order have been considered to obtain reduced order models by WOA. The step and frequency responses of HOS and LOS have been compared. The results have been compared in terms of rise, settling times in seconds and maximum peak overshoot in percentage. It is revealed that the response of proposed WOA based LOS is much closer to that of original HOS. Further, comparison of ISE with other existing techniques in literature has been shown in both tabular and graphical forms to show the superiority of the algorithm. **Keywords**: Whale Optimization Algorithm, Integral Square Error, Order Reduction, Stability.

WASTE WATER CONSERVATION IN BUILDINGS

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Abstract-

Water consumption is increasing in daily life, which is contributing to global water problems. We are attempting to mitigate the situation by repurposing the water for other purposes such as irrigation, cleaning, and so on. We are also extracting some potential energy from waste water. A person's daily water intake ranges from 120 to 150 liters, as we all know. In the future, most people will live in apartments, and there will be many floors in the building, which will provide us with a very good head of water for producing energy, as well as a good pressure, which we will utilize for water filtering. The long-term aims of this initiative include making waste energy usable. Waste water is a resource that can be put to good use. The technology generates energy from waste that is processed, and it aids in the development of smart buildings.

A SMART FAKE NEWS DETECTION SYSTEM BASED ON MACHINE LEARNING

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Abstract-

A Fake News Detector is a tool on a next generation communications and collaboration platform. When links are sent to each other while talking, the FND algorithm is activated. It looks at the content of links to websites that have been ranked in their databases. It generates a warning message and assigns a statistic rating if the source is not considered reliable. Flocks has over 600 fact-checked news URLs in its database. The problem with this method is that their fact- checking database is tiny, which increases the chances of hoaxes being undetected. Nowadays, social media activity, especially news that spreads over the internet, is a fantastic source of information. Because of the minimal effort, simple availability, and convenience of internet- based living, people seek out and consume news from it. Information disseminated quickly As one of the most well-known ongoing news sources, Twitter is also one of the most widely used news dissemination platforms. It has a track record of causing major harm by spreading old rumors.

A CASE STUDY OF PRODUCTIVITY ENHANCEMENT IN INDUSTRIES USING INDUSTRIAL ENGINEERING METHODOLOGIES

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Abstract-

Productivity is a fateful factor in the production of product in production industries and nations.

It can raise the living standard of human as the true income improves, people's ability to purchase goods and services enhances, enjoy more leisure time, improve housing and education and contribute to social and environmental programs. Productivity enhancement can also help businesses to be more profitable. This study starts with reading the standard operation procedures

and analyzing the process flow to get the whole idea on how to manufacture paper industrial engineering tools to get better products. This paper presents a case study in the development and application of different methodologies of Industrial Engineering like Automatic packing machine, improved layout etc. Mostly these types of methodologies are adopted in different small medium scale enterprises (SMEs). The motivation for this study was the need to tackle the problem of productivity per shift between the employee-association and the management of the company regarding questions of productivity. In this study, the two products form similar production processes and different processes for same types of products have been organized.

IOT BASED RFID ATTENDANCE SYSTEM

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Abstract-

In recent years, there have been rise in the number of applications based on Radio Frequency identification (RFID) systems and have been successfully applied to different areas as diverse as transportation, health-care, agriculture, and hospitality industry to name a few. RFID technology facilitates automatic wireless identification using electronic passive and active tags with suitable readers. In this paper, an attempt is made to solve recurrent lecture attendance monitoring problem in developing countries using RFID technology. The application of RFID to student attendance monitoring as developed and deployed in this study is capable of eliminating time wasted during manual collection of attendance and an opportunity for the educational administrators to capture face-to-face classroom statistics for allocation of appropriate attendance scores and for further managerial decisions.

STUDY ON NETWORK TOPOLOGY DISCOVERY IN IP NETWORKS

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Abstract-

Technologies in the domain of network management, which has been researched for many Nowadays, network is becoming more and more complicated. Topology discovery becomes a hot research point as it is of high importance to network management. Current topology discovery methods have been investigated in this paper, which can be classified as common-protocol-based method, router-protocol-based method and SNMP- protocol-based method, all of which are specifically discussed in the following sections. The advantages, disadvantages and using scope of every method are analyzed and finally a comparison is made.

THE RANKING FRAMEWORK OF PROGRAMMING LANGUAGES THROUGH MULTI-CRITERIA BASED DECISION MAKING AND MACHINE LEARNING ALGORITHMS

Deepesh Asthana, Assistant Professor, Computer Science & Engineering, RBS Polytechnic, Agra, Uttar Pradesh

Abstract-

There are a number of programming languages having their own capabilities and restrictions. This is really hard for student to find out the appropriate order in which programming languages should be studied. Most of the students withdraw programming related courses as they feel themselves uncomfortable in understanding the programming just because of the inappropriate selection of the first programming language to learn coding skills. We are proposing a ranking framework to rank the programming languages with an aim to decide the order in which these languages can be taught. We have utilized WASPAS method and recurrent neural network to develop the model. The proposed model will help to design the curriculum of programming-related courses.

LEADERSHIP FOR VIRTUAL TEAM BUILDING PRE AND POST COVID TIMES

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Abstract-

The outbreak of pandemic has forced all the sectors to think beyond the imagination in order to survive in the toughest situations like Covid-19. So, as the organizations also has to rethink their organizational structure in order to maintain the smooth functioning of their operations in the time of crises. Leaders and managers in association to each other explore the ways to improve the ambience of the workplace for scaling the profitability of the business. The organizational dynamics and upgrading technology has increased the adaptability of the organizations. The resilience in organization has shifted the work culture from offline to online platform as well. A virtual team is an evolutionary form of a network organization enabled by advances in information and communication technology. Adequate literature availability and investigation of leadership for virtual team is still in its primary stages. Therefore, through this study the researcher wanted to study the pre and post Covid times with respect to leadership for virtual team. Virtual teams during the post-transition phase (June–August 2020) showed better levels of team action processes and conflict management compared to teams working in the immediate transition phase (March–May 2020), indicative of an adaptation effect.

BLUETOOTH, VOICE CONTROLLED & OBSTACLE AVOIDING ROBOT USING ARDUINO CONTROLLER

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Abstract-

A robotic assistant reduces the manual efforts being put by humans in their day-to-day asks. In this paper, we develop a voice-controlled personal assistant robot. The human voice commands are taken by the robot by its own inbuilt microphone. This robot not only takes the commands and execute them, but also gives an acknowledgement through speech output. This robot can perform different movements, turns, wakeup/shutdown operations, relocate an object from one place to another and can also develop a conversation with human. The voice commands are processed in real-time, using an offline server. The speech signal commands are directly communicated to the server using a USB cable. The personal assistant robot is developed on a microcontroller based platform. Performance evaluation is carried out with encouraging results of the initial experiments.

HEURISTIC ALGORITHM AND ITS APPLICATIONS

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Abstract-

AI is dominating, nowadays. Scientists are focused about to generate new AI algorithms and analyzing the existing ones to enhance their performance. The biggest task in the field of AI is to make the machine able to take the decision. We have ways to solve the problem but when it comes to being time optimized the domain is very small. The problems like NP-hard problems take exponential time to solve a problem which is not feasible in the real world where time is a great constraint. Heuristic algorithms are an interesting topic to focus on. In this review paper, we will be focusing on different applications of Heuristic algorithms in different-different domains, their advantages, and limitations.

WIRELESS SENSOR NETWORKS ROUTING PROTOCOLS: A STUDY

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Abstract-

Wireless Sensor Networks (WSN), consist of thousands or even more sensor nodes deployed either inside the phenomenon or very close to it depending upon the application. These sensor nodes are capable of sensing, actuating, and relaying the collected data, which have made a remarkable impact globally. The collected data by the sensing device must be gathered and transmitted to a base station where it is again processed for further end-user queries. Since the network consists of low-cost nodes with limited battery power, power management must be implemented for data gathering and processing in order to achieve long network lifetimes. Researchers are making their effort in developing new protocols for data transmission by the sensing devices in the network by keeping in mind the power efficiency and its management. The attention in these protocols is specifically given to routing protocols as they might differ based on the application and network architecture. As wireless sensor technology is refining itself a wide number of organizations are using it for a many range of purposes. This paper presents the complete overview about the Wireless Sensor Network including its architecture, hardware constraints and how this sensor works on network layer protocol. Network layer routing protocols are also described and discussed under the appropriate category. Moreover, protocols using contemporary methodologies such as network flow and quality of service modelling are also discussed.

A SURVEY ON THE CLUSTERING TECHNIQUES IN WIRELESS SENSOR NETWORKS

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Abstract-

A wireless sensor network is a wireless network in which the autonomous devices, such as sensors, are distributed that can collect reliable and accurate information in distant and hazardous environments. In basic wireless network sensors nodes can be deployed in an ad-hoc fashion. As the data obtained from the environment may require a large number of sensor node depending on the region covered. Consequently, management of network become difficult due to large number of nodes and complex structure is required. In many situations, the data collected by many nodes will be same therefore, in such case redundant data transmission can be eliminated by forming group of nodes called clusters. By electing a node as the cluster head among the nodes that aggregates the data from all cluster nodes and transmit the data to base station. Eventually, leads to faster battery drainage in the fixed cluster head. If one cluster head dies, it will affect the working of the network. This paper presents various dynamic clustering techniques to maximize network lifetime. These techniques increase network scalability, life, diverse distribution control and energy efficiency. These are mainly divided into two broad categories such as Hierarchical and Grid schemes. This paper mainly focuses on the comparison between leach, heed, pegasis and many more.

IMAGE RECOGNITION: CNNS AND DNNS

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Abstract-

This paper is presented as a work of revision on the break through soft Image Recognition technology and its underlying workings. CNN models are the most popular neural network models used in the image classification problem. The working of CNNs is discussed with the ways of handling the data. The ways in w2hich we can get the most out of a particular set of data. Deep neural network models with the contrast between plain and residual networks are also discussed. Ways of incrementing the mean accuracy of the models is also addressed with the ease touch of basicity.

ADVANCES IN THE STRATEGIES FOR ENHANCING THE PHOTOCATALYTIC ACTIVITY OF TIO2: CONVERSION FROM UV-LIGHT ACTIVE TO VISIBLE-LIGHT ACTIVE PHOTOCATALYST

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Abstract-

Advanced oxidation process, a green method in contribution to betterment in environment has been emerged to a larger scale in past decades. Conventional wastewater strategies possess release of detrimental by-products. Hence, photocatalysis , has been taken in account as an advanced oxidation, eco-friendly, cost effective, and non-detrimental strategy for wastewater treatment and enironmental remediation. It is now-a-days taken under consideration to utilize most of the solar energy for clean energy production in form of hydrogen gas as well as environmental remediation. Conventionally efficient photocatalyst, viz. TiO_2reported in literature is UV-active due to its larger band gap. However, solar light spectra consist of only approx. 5% UV and 45% visible light radiations. Therefore, the aim of this literature study is to enhance the activity of photocatalysts, employing distinct modifications strategies to decrease band gap and making the photocatalyst efficient to absorb visible light range. This review summons up photocatalytic mechanism, as well as several modulation techniques Viz. variation in semiconducting material by metal/non-metal doping, sensitizer doping, heterojunction formation and semiconductor coupling, oxygen vacancies formation, cocatalyst loading, and effect of defect formation, for conversion of UV light active photocatalysts to visible light active as well as increment in visible light absorption. Modified titanium dioxide in visible spectrum had shown a highly advantageous applications including degradation of pollutants for waste-water treatment., hydrogen production, CO_2 reduction and antibacterial activity; and established in this review.

PREFORMULATION PROBING OF LEVOTHYROXINE

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Abstract-

Levothyroxine therapy is given when deficient in the thyroid hormone is found in the human body. Many circumstances physiological or quasi- physiological or clear pathologically, it can modify the absorption of levothyroxine in the human body. Levothyroxine intake may actually vary by age and patient compliance, fasting, consumption of certain foods from (fibre, grapes, soybeans, papaya, coffee, etc.) or some medicines (proton pump inhibitors, antacids, sucralfate, etc.). In addition, there can be many gastrointestinal illnesses, including conditions and illnesses that disrupt the integrity of the intestinal barrier. Anything that affects stomach acid can alter the bioavailability of levothyroxine. Because it's the huge widespread prevalence of thyroid disease, large many patients face such problems. Therefore, forming the new levothyroxine oral preparations other than solid tablets represent an interesting therapeutic approach at the same time, simple and potent to face this problem. Recently, two different levothyroxine were introduced formulations are proposed: liquid and soft gel formulations. Such prescriptions are innovative and effective an inexpensive therapeutic approach for patients with hypothyroidism with mal-absorption problems levothyroxine.

SAPONINS FROM SOLANUM ANGUIVI FRUITS EXHIBIT HYPOLIPIDEMIC POTENTIAL IN RATTUS NORVEGICUS

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Abstract-

The quest for save herbal remedy for the management of cardiovascular diseases prompted this investigation and it is aimed at determining the effect of Saponin from Solanum anguivi fruits on serum lipid profile - a risk factor in the development coronary heart disease (CHD).Thirty six (36) rats(Rattusnovergicus) of average weight (125± 12g) were divided into six (6) groups of six animals each designated as A (n=6, 2.0ml distilled water), B (n=6, 20mg/kg saponin), C (n=6, 40mg/kg), D (n=6, 60mg/kg), E (n=6, 80mg/kg), and F (n=6, 100mg/kg). Saponin was administered orally once daily to groups B,C,D,E and F for (21) days. Serum lipid profile was determined using diagnostic kits. The result showed an initial significant increase ($p<0.05$) in weights of the treated animals when compared with the control but by the third week, the increase was not significant. A significant reduction ($P<0.05$) in serum Triglycerides, total Cholesterol and Low-Density Lipoprotein(LDL) was observed while High-Density Lipoprotein (HDL) was significantly increased. The dose dependent effects of saponin from Solanum anguivi fruit on serum lipid profile is very crucial, as it may reduce the risk of developing CHD. Saponin from Solanum anguivi fruits has hypolipidemic potential which is one of the greatest risk factors contributing to the prevalence and severity of coronary heart diseases.

MICROBIAL SYNTHESIS OF NANOPARTICLES

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Abstract-

Nanoparticles are synthesized by different methods such as physical methods, chemical methods and biological methods. The need is the greener pathway and method for the synthesis of nanoparticles so that the process in non-toxic and do not harm the environment. Microbial synthesis or biological methods are applied for the synthesis in a greener fashion using different microorganisms such as algae, bacteria, fungus etc. Silver nanoparticles being antibacterial in nature are of great interest. They are used to treat cancer, tumors, and used in drug delivery process and many more countless applications. The UV and IR characterization shows the peaks of the silver nanoparticles. UV characterization shows peak of at approximately 400nm. Silver nanoparticles have a potential application as antibacterial behavior which is explained by the Wells method. The antibacterial studies of silver nanoparticles were carried out and it was found that silver nanoparticles have great efficacy against bacteria and inhibits the growth of bacteria and have a huge scope in future medical studies.

IMPACT OF GREEN ACCOUNTING CORPORATE CULTURE: A STUDY OF DEVELOPING COUNTRY

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Manish Kumar, Assistant Professor, Applied Sciences, Eshan College of Engineering, Mathura, Uttar Pradesh

Abstract-

This study serves literatures on the development of green accounting information divulgence at home and abroad, and then finds that international governments, organizations and social communities spend more time and energy on this research than India's. Besides, the methods of international green accounting theory is completed and mature, from which inspiration is obtained on how to implement green accounting information divulgence in India this research focuses on the different problems and solutions in implementing green accounting. The green accounting is a new type of accounting. In adding to simply checking a company' s income or loss or its revenues and costs surroundingsal is a rising field that emphases for accounting the ecological impact of acquaintance The green accounting is helpful for info about the usage, impact, grade, and the value of normal resources in a nation. It also spans solution around expenditures upon resource top management and surroundingsal defense. To present green accounts in SNA allows the policy-making figure to investigate the relations among economics & surroundings charge.

CHANGING SCENARIO OF GREEN MARKETING

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Abstract-

Green marketing has opened the door of opportunity for companies to co-brand their products into separate line, lauding the green-friendliness of some while ignoring that of others. Such marketing techniques will be explained as a direct Result of movement in the minds of the consumer marketing. As a result of this business have increased their rate of targeting consumers who are concerned about the environment these same consumers through their concern are interested in integrating environmental issues into their purchasing decisions through their incorporation into the process and content of the marketing strategy for whatever product may be required this paper discusses how business have increased their rate of targeting green consumers, those who are concerned about the environment and allow it to affect their purchasing decisions . The paper identifies the three particular segments of green consumers and explores the challenges and opportunities business has with green marketing. The paper also examines the present trends of green marketing in India and describe the reason why companies are adopting it and future of green marketing concludes that green marketing something that will continuously grow and both practice and demand.

BIG DATA ANALYTICS AND BUSINESS ANALYTICS: AN OVERVIEW

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Abstract-

Big data analytics and business analytics are a disruptive technology and innovative solution for enterprise development. Business analytics is a revolution that is impossible to miss. At its core, business analytics is about leveraging value from data. Instead of being referred to as the 'sludge of the information age,' data has recently been deemed 'the new oil.' While data can be employed for purposes such as detecting new opportunities, identifying market niches, and developing new products and services, it is also notoriously amorphous and hard to extract value from. Searches of the Web using Google, and database searches of the academic and practitioner literature return a large number of differing and varied definitions of the concept of business analytics. This article reviews the growing literature on Business Analytics (BA). In this paper we have discussed various benefits of business analytics and numerous challenges to the application and use of analytics. The reviewed areas of big data suggest that good management and manipulation of the large data sets using the techniques and tools of big data can deliver actionable insights that create business values.

TO STUDY THE ORGANIZATIONAL DEVELOPMENT WITH SPECIAL REFERENCE TO INDIA

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Sidhant Agnihotri, Scholar, Eshan College of Management, Mathura, Uttar Pradesh

Hitesh Kumar, Scholar, Eshan College of Management Mathura, Uttar Pradesh

Abstract-

This paper aimed at identifying the meaning of Organizational Development (OD) and its all systems used to increase organizational efficiency and Effectiveness in a turbulent environment characterized by hyper-hostility to strive its growth, development, prosperity, and sustainability. This study attempts to bring out the impacts of Organizational Development interventions in public sector organizations that render effective service to the public. Besides, this research is mainly focusing on the employees' perspectives of their understanding and their involvement on Problem solving, suggestion schemes, Rewards & recognition, Trust, Conflict management, commitment, Collective responsibility and Employee morale and also, it observes the factors influencing on such measures, that need to be taken by the management to overcome such barriers and create better impact. This research is a significant one, towards the contribution of exposing the realities in Organizational Development interventions, in the Port Sector companies. The study attempts to disclose the different levels of impact of OD interventions in Port Sector companies, which was perceived by its employees.

A STUDY ON MSME INDUSTRY IN INDIA

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Abstract-

Micro, Small and Medium Enterprises (MSME) sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades. MSMEs not only play crucial role in providing large employment opportunities at comparatively lower capital cost than large industries but also help in industrialization of rural & backward areas, thereby, reducing regional imbalances, assuring more equitable distribution of national income and wealth. Start-up India is a flagship initiative of the Government of India, intended to build a strong ecosystem for nurturing innovation and Start-ups in the country that will drive sustainable economic growth and generate large scale employment opportunities. The research was conducted to know the present status of MSME`s in India, problems and solutions related to MSME`s start-up and its impact on MSME in India. The objective of the study was to know the start-up of entrepreneurs and their activities, to know the prominent source of financing and problems faced by entrepreneurs. Secondary data collected through internet, annual report and research papers. The overall study reveals that there is a good scope for entrepreneur.

ROLE OF SOCIAL MEDIA FOR STUDENTS' ADMISSION IN HIGHER EDUCATIONAL INSTITUTIONS

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Abstract-

Over the past decade, social media have become embedded in our daily lives. They have changed the way of living and one of the most important tool of communication and entertainment. The use of social media by teens and young adults is continuously increased. Higher education institutions recognize the value of social media as a tool of communication to provide information to target students and use its platforms to advertise their course and programmes to prospective students.

Students also use Social Media and Facebook to access and analyse information to make informed study decisions. The present study examines how social media in general, and Facebook in particular, influences students' admission of study programme and Higher Education Institute (HEI).

Quantitative research methods were used as most suitable for this particular study. A total of 150 students from Agra, Uttar Pradesh participated in this survey; eighty five male and sixty five female students. All students completed a survey questionnaire based on four sections (A, B, C and D) comprising ten questions primarily based on the Likert scale. Simple descriptive statistics and SPSS were used to identify and analyse the factors students considered most important (influential) in their (the students') admission of programme higher education study. The most popular social media site was Facebook, followed by Instagram. Facebook has been used as a marketing tool by higher education institutions.

ORGANIZATIONAL DEVELOPMENT: A LITERATURE REVIEW

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Abstract-

The review of literature on organisational development has been outlined up in view of its increased popularity and about dealing with the effectiveness and efficiency of organizations. The fundamental premise of organisational development, which derives many of its roots from organisational psychology, sociology and change management, is that by designing and delivering ―interventions‖ that change the social systems, ways of working and cultures within organisations, it‘s possible to both improve their competitiveness, and make them better places for people to work. The researcher has reviewed the literature on organizational development with regard to meaning and definition of OD, significance of OD, barriers of OD, coping strategies of OD, steps of OD. In this research paper, the researcher has dealt the various aspects of organisational development through the review of literature. The sources referred include various journals, books, doctoral thesis, working papers, reports, magazines, internet sites, etc. and has been reflected as references at the end.

CHANGING PATTERN OF LEADERSHIP DEVELOPMENT: A STUDY OF DEVELOPING COUNTRY

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Abstract-

Interest in leadership development is strong, especially among practitioners. Nonetheless, there is conceptual confusion regarding distinctions between leader and leadership development, as well as disconnection between the practice of leadership development and its scientific foundation. The present review examines the field of leadership development through three contextual lenses: (1) understanding the difference between leader development and leadership development (conceptual context); (2) reviewing how state- of-the-art development is being conducted in the context of ongoing organizational work (practice context); and (3) summarizing previous research that has implications for leadership development (research context). The overall purpose is to bridge the practice and science of leadership development by showing the importance of building both human and social capital in organizations. Specific practices that are reviewed include 360-degree feedback and executive coaching, mentoring and networking, and job assignments and action learning. Practices and research are framed in terms of a general need to link leader development, which is primarily based on enhancing human capital, with leadership development that emphasizes the creation of social capital in organizations.

BUILDING TRUST AT WORKPLACE: A RELATIONSHIP ORIENTED CULTURE

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Abstract-

Trust is the "firm belief in the reliability, truth or ability of someone or something." However, the definition of trust also needs to include the expectation of "ethically justifiable behaviour" – that the person is trusted to do the right thing. But trust isn't just a nice thing to have in a team or working relationship, it is central to effective organizational performance. Creating a high trust organization is the challenge faced by all leaders. Trust doesn't just happen overnight, it requires an inter-related set of policies, such as promoting a relationship orientated culture, creating opportunities to meet informally and a day-to-day management of workplace competencies. We measure trust along with an effective team through an anonymous, online assessment that asks people to rank their team's effectiveness. A high trust team is critical to productivity, performance and effectiveness within an organization. Trust is important because your success or failure is often based on your relationships. Every professional relationship should be built on a foundation of trust. For you to agree on a solution or reach a compromise, this confidence will be a key factor. Trust is built from the top to bottom. For your employees to be committed to doing their best work, they have to trust in you. By adopting the techniques, you can quickly build trust and inspire your team to put forth their best work.