

ICMIT-2021

20-21 August, 2021

International Conference on Management & IT

Inter-Disciplinary Research in Computer Science and
Management for achieving Sustainable Development Goals

Book of Abstracts



ISIM

International School of Informatics & Management
Technical Campus, Jaipur

Co-partners



20-21 August, 2021

ICMIT-2021

International Conference on Management & IT



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About The Conference

In this era of fast moving societal transformations, numerous types of socio-economic problems, having relation to other disciplines have arisen which demand comprehensive approach to attain solutions for Sustainable Development. In Interdisciplinary research, teams or individuals integrate information, techniques, tools and concepts from two or more disciplines to solve problems. The conference shall be a platform to showcase policies, tools and techniques for achieving Sustainable Development Goals pertaining to the Economic, Financial, Environmental and Socio-Cultural aspects.

The conference revolves around bringing technology and management research areas synchronically on an indivisible platform to work towards achieving Sustainable Development Goals with latest research findings and ideas. The main intention of this conference is to integrate interdisciplinary inquiry to deliver the best applications by formulating solutions and strategies to cope up with the challenges faced by society.

This Conference aims to bring together leading academic scientists, policy makers, top managers, practitioners, researchers and research scholars to present, discuss, exchange and share their experiences, recent innovations, current trends, analytical approaches, practical challenges encountered and research results adopted on all aspects. They will also have the chance to meet experts and high-level delegates, along with sharing of ideas and research findings with peers from past and present. Participants can build new networks to meet different personalities and learn about the latest tools available. This conference will serve as a unique confluence of knowledge, networking, entertainment and learning in one ensemble.

The society will benefit by the application of ideas and methods emerging from the meeting of minds. The exchange of research findings, opinions, concepts and tools will contribute in furthering research and implementation of its findings for larger societal good.

OBJECTIVES:

- To provide different approaches and perspectives with exchanges of methodology on Sustainable Development Goals.
- To necessitate the collaboration of people of diverse expertise across a range of disciplines together to achieve the goals.
- To create collaborative team of interdisciplinary experts who can think beyond the routine knowledge to solve particular problems on health, education, food and access to essential services.
- To provide opportunities for academics to receive informal in-depth feedback through discussions, and to enable them to establish contact with professionals in other countries and institutions.
- To address solutions on the global challenges faced everyday related to poverty, inequality, climate change, environmental degradation, education, peace and justice.

The opinions expressed by the authors are their own and editors cannot accept any legal responsibility or liability for the views of authors, any omission or inadvertent errors.





CHIEF MINISTER
RAJASTHAN

Message

I am delighted to know that the International School of Informatics and Management, Jaipur is organizing an International Conference on 'Inter-Disciplinary Research in Computer Science and Management for achieving Sustainable Development Goals' on August 20-21, 2021.

Efforts being made by different stakeholders on sustainable development are creating a society where living conditions and usage of natural resources continue to address the human needs without compromising on stability and continuity of the natural ecosystem. It is an issue of critical importance and is much needed for transformation of our country into a self-sufficient resourceful nation.

I hope that this conference will provide a platform to the academicians, researchers and other stakeholders to showcase the policies, tools and techniques being adopted by our institutions and the government bodies for achieving the Sustainable Development Goals (SDGs) defined and deliberated upon by the world community. The discussions held therein will result in bringing out an effective plan for meeting the SDGs for the benefit of humanity.

I extend my best wishes to the organizers for the conference to be a success.

(Ashok Gehlot)



WELCOME NOTE

International School of Informatics & Management (popularly known as IIIM) ranks amongst the best Management and Technical institutions in Rajasthan and has contributed to all sectors of business and technological development. Since its inception, the institution has played an imperative role in providing managerial and technical manpower and know-how to the country. It has also been considered a trend-setter in the area of education and in pursuit of research in the field of Management and Computer science. The institution was accredited with grade 'A' (the highest in 2016) by NAAC in 2016 and thus has been state's first institute to have 'A' Grade amongst the MBA and MCA institutions. Besides, the institute has been consecutively ranked first in the category 'A' for the academic sessions 2017-2018, 2018-19 and 2019-2020 by Rajasthan Technical University, Kota, for its MBA and MCA programs on the basis of Quality Index Value (QIV) score. It has also been ranked first in category 'A' for its MBA program in 2020-21 & placed in category 'A' in 2020-21 for its MCA Programme. The institute has also been able to achieve distinguished ranks among all the institutions in India, in the surveys conducted by agencies such as CSR-GHRDC, Indian Management and Business world.

The institution with its unflinching efforts and determination to provide the best amenities for the attainment of quality technical education and with the profundity of culture, tradition and its commitment to value based quality education ensures that students by the end of their respective course are well prepared for their finest hour, that is, stepping into their chosen career. Also, to develop and impart a rewarding learning environment for students, apart from using state-of-art teaching tools and techniques, the institute emphasizes on strong industry-institute interface, curricular and extracurricular activities and thus, organizes a surfeit of events all through the year. ICMIT 2021 is just another link in the sequence of events that we carry out on a regular basis. In our endeavor to enhance the reach of this conference, this year also, we have made preeminent efforts to organize this conference through online mode due to ongoing pandemic COVID-19. We are glad that we have been able to keep up the partnership with Northern Technical University, Iraq, Institute of Leadership and Development Communication, Nigeria, Nepal Open University, Nepal and IIS (deemed to be) University, Jaipur for organizing the international conference and this time we have also successfully appended new partners to this coalition, including Northern University, Bangladesh, Bingham University, Nigeria, Center for Integrated Research of Health and Development, Dhaka, Bangladesh, CT University, Punjab, Himalayan Garhwal University, Uttarakhand.

The world today is facing one of the biggest pandemics ever. We are witnessing heightened tensions and humanitarian crises, violent, interlinked and multiplying conflicts, and unprecedented scales of movement of people forced to flee their temporary homes and places of work. Without collective and coordinated global efforts, people risk starving to death and succumbing to disease, lost futures, mass displacements and reversed development gains. The task in front of us is exigent; moreover, the current situation of turmoil has made it tricky for the countries to achieve agenda of the 17 Sustainable Development Goals adopted by the UN General Assembly in 2015. Indeed, world leaders should acknowledge this and commit to protect the richness of life and nature on our planet, the only home we have, by encouraging and promoting research and innovations in every sector, be it medical science or engineering, be it communication or education, be it Computer Science or Management for achieving Sustainable Development Goals. SDGs represent a novel coherent approach wherein, issues as diverse as education, poverty, and climate change intersect and also ensconce social, economic, and environmental goals in a comprehensive way. Each goal relies on another, although there are no clear ways to measure this junction. Multilateral structures and institutions that accelerate sustainable development through interdisciplinary research are more vital than ever to reduce inequality and foster peace and prevent conflict for resources on this planet.

With this backdrop, the theme for this International Conference 'Inter-Disciplinary Research in Computer Science and Management for achieving Sustainable Development Goals' has been determined. The objective of this conference is to provide a meaningful platform to discuss, share, and witness radical research and efforts, in all areas of Computer Science and Management. Also, the conference aims at gaining actionable insights for finding new paths for successful journey towards achieving Sustainable Development Goals through inter-disciplinary research in Computer Science and Management.

Dr. Ashok Gupta
Director



INTRODUCTION

The Sustainable Development Goals espoused by the United Nations in 2015 are the blueprint to achieve a better and more sustainable future for all by 2030. Until recently, development progressed steadily, albeit unevenly and countries are not on track to meet the Sustainable Development Goals by 2030. Moreover, pandemic Covid-19 strikes the development agenda hard, infecting and killing millions of people. It has plunged the world into a severe slump, repealing income convergence trends between low-income developing countries and highly developed economies. The current crisis has disrupted progress towards basic development goals, as developing countries must now balance urgent spending to protect lives and livelihoods with longer-term investments in health, education, physical infrastructure, and other essential needs. We are all still waiting for innovative research and actions to peter out this massive predicament absolutely. Further, the complexity of sustainable development cannot be adequately addressed by research approaches restricted to a single scientific discipline. Also, the global socio-economic and environmental challenges are so complex and interconnected that they cannot anyhow be addressed by individual disciplines operating in silos. Thus, innovative research, information, expertise and pecuniary resources from the society as a whole are necessary to achieve the Sustainable Development Goals in every circumstance. We now need new responses to the emerging challenges. There is need of promoting innovative inter-disciplinary research as a crucial means of extenuating perils and generating futuristic solutions to the most imperative challenges in the way of achieving Sustainable Development Goals and ensuring peace and prosperity on this planet.

The theme of the conference 'Inter-Disciplinary Research in Computer Science and Management for achieving Sustainable Development Goals' has been conceived to explore, discuss and share research findings pertaining to the challenges in the achievement of SDGs and also provide the participants with a meaningful platform to discover sustainable pragmatic solutions in the field of Management and Computer Science thereby steering new business paradigms which enable rapid economic growth without compromising the capacity of the ecosystem to sustain, nurture and fuel economic development, and human well-being on this Earth.

The conference focuses on diverse dimensions of the theme. The sessions are designed to address the main issues and discover and design innovative methods and strategies to achieve Sustainable Development Goals.

The technical session I on "Transformational Technology, Innovation & Digital Collaboration" intends to focus on the rapidly changing landscape driven by the emergence of new technologies especially Information, Communication and Entertainment technologies all posing new challenges in the current scenario and also attempts to explore the latest innovative solutions and developments made in the field through digital collaboration.

The technical session II on "Developments in Organizational Change Leadership" provides a platform to look into and address the need to reframe the challenges facing organizational change and leadership.

The technical session III on "Fostering synergies between IT based solutions and managerial practices for achieving Sustainable Development Goals" attempts to investigate and unveil the managerial & technological facets fostering synergies for achieving Sustainable Development Goals.

The Panel Discussion on "SDGs: How are our Organizations faring and the Road Ahead" aims at demystifying and examining the progress towards attainment of SDGs and the potential strategies to achieve Sustainable Development Goals.

I hope the deliberations and interactions initiated during the two day conference will provide a learning platform to all the participants, speakers and delegates giving them a better insight into the emerging issues in Sustainable Development and identify ways and means of achieving Sustainable Development Goals through interdisciplinary research in Computer Science and Management.

Dr. Manju Nair
Convenor

EDITORS' NOTE

In the present era, sustainability is an imperative societal issue because we are faced with the quandary of tackling fast-paced shift in global technology, population and consumption patterns, rising inequalities, climate change, loss of biodiversity and increasing amounts of waste from human activity. There is a broad consensus that the current trajectory of modern society is untenable. Therefore, it is necessary to find a solution though this effort has been led by confederacy around the Sustainable Development Goals (SDGs). But, with just nine years remaining to achieve the 2030 agenda, no country has so far convincingly been able to meet a set of basic human needs at a globally sustainable level of resource use. Consequently, the partial accomplishment of the goals raises strong concerns and alarms the global society. A lot needs to ensue rapidly to bring about the transformative changes. There is urgent need to modify or reverse the impeding policies and also to scale-up in accelerated mode the recent advances that promote the Goals. Thus, the multidisciplinary nature of sustainability challenges faced by the world today makes it necessary to explore the possible solutions through research in various disciplines. Innovations in the field of Business Management and Computer Science confirm the role of technology in supporting the requisite revolutionary changes. Moreover, Information Technology is a conduit of social and technical solutions since it can proffer enhanced communication and transparency for fostering the required economic, political, and cultural adjustments. Besides, Information Technology is at the heart of virtually every large-scale socio-economic system including systems for Finance, Manufacturing, Generation and Distribution of Energy and many more and also the sustainability focused alterations in those systems are inextricably associated with advances in Computer Science.

In this setting, this international conference on the theme 'Inter-Disciplinary Research in Computer Science and Management for achieving Sustainable Development Goals' aims at providing interdisciplinary platform to bring together leading academicians, researchers and practitioners to deliberate, discuss, present, exchange and share their experiences and research results to enlighten the participants about the contribution and scope of Management and Computer Science in the achievement of Sustainable Development Goals and also provide direction for further research in these areas.

We welcome all the participants and anticipate that their valuable inputs would help in exploring new avenues of achieving Sustainable Development Goals through research in Management and Computer Science.

We are extremely grateful to our speakers and researchers for their overwhelming response.

Prof. Manju Nair
Prof. Kavaldeep Dixit
Prof. Swati V. Chande
Dr. Vijay Gupta
Dr. Tripti Bisawa
Dr. Preeti Tiwari

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- Dr. H. M. Jahirul Haque, Vice Chancellor, University of Liberal Arts Bangladesh, Dhaka, Bangladesh

PROGRAMME SCHEDULE

DAY - 1 (August 20, 2021)

SNO	Speaker	Time
INAUGURAL CEREMONY (10:00 AM – 11:00 AM)		
1.	Dr. Ashok Gupta, Director, ISIM, Jaipur	10:05 AM – 10:09 AM
2.	Dr. Manju Nair, Principal, ISIM, Jaipur	10:09 AM – 10:19 AM
3.	Guest of Honor - Dr. Sunil Kumar Sahu, Research Scientist, State Key Laboratory of Agricultural	10:19 AM – 10: 24 AM
4.	Chief Guest - Shri Arvind Sharma, Chairman Cheetah Soft Tech. Pvt. L td.	10:24 AM – 10:34 AM
Technical Session -1 (11:00 AM – 12:50 PM)		
Transformational Technology, Innovation & Digital Collaboration		
5.	Prof . Dr. Beatriz Lucia Salvador Bizotto, Departamento de Ciências Sociais e Aplicadas, Centro Universitário Unifacvest Lages Santa Catarina – Brasil	11:00 AM – 11:30 AM
6.	Shri. M V Padmanabhaya, Sr. Director & Scientist 'G', Standardization Testing and Quality Certification Directorate, Government of India, Ministry of Electronics & Information Technology, Hyderabad	11:30 AM – 12:00 PM
7.	Prof(Dr) Ajith Kumar VV Vice Chancellor, Skyline University Nigeria	12:00 PM – 12:30 PM
Paper Presentation -1 (11:00 AM – 12:50 PM)		
Transformational Technology, Innovation & Digital Collaboration		
8.	Session Chair: Prof (Dr.) Ampu Harikrishnan, Pro Vice Chancellor , Himalayan Garhwal University, Uttarkhand	11:00 AM – 12:50 PM
9.	Session Chair:	11:00 AM – 12:50 PM
PANEL DISCUSSION (2:00 PM – 4:00 PM)		
SDGs: How are our Organizations faring, and the Road Ahead		
10.	Prof. Rajesh Kothari, Advisor, Research & Innovation, Taxila Business School, Jaipur	2:00 PM – 4:00 PM
11.	Mr. Deepak Kumar, Associate Vice President - Data Science, Karvy Insights, New Delhi	2:00 PM – 4:00 PM
12.	Dr. Pramila Sanjaya, Advisor, SIDART (Society for Integrated Developmental Activities Research Training)	2:00 PM – 4:00 PM
13.	Ms. Saji Menon, Application Scientist, Nano Temper Technologies, Bangalore	2:00 PM – 4:00 PM
14.	Dr. G. Soral, Professor (Retd.), Dept. of Accountancy and Business Statistics, Mohanlal Sukhadia University, Udaipur	2:00 PM – 4:00 PM

DAY - 2 (August 21, 2021)

SNO	Speaker	Time
Technical Session-2 (9:00 AM – 11:00 AM)		
Development in Organizational Change Leadership		
1.	Prof (Dr) Indranil Bose, Dean, School of Business, University of Bolton, Academic Centre Ras Al Khaimah, United Arab Emirates	9:00 AM - 9:30 AM
2.	Dr Muthusamy Ramakrishnan, Associate Professor, Co -Innovation Center for Sustainable Forestry in Southern China, Bamboo Research Institute, Nanjing Forestry University, China.	9:30 AM - 10:00 AM
3.	Dr. Soumi Dutta, Associate Professor & Assistant Head of the Department, BCA & M.Sc (Computer Sc. Department, Institute of Engineering & Management, Kolkata	10:00 AM – 10:30 AM
Paper Presentation -2 (9:00 AM – 11:00 AM)		
Development in Organizational Change Leadership		
4.	Session Chair: Dr. S. C. Jain, Professor, Computer Science & Engineering Rajasthan Technical University, Kota	9:00 AM – 11:00 AM
5.	Session Chair: Dr. Dhruva Pandey, Professor, ITS, Ghaziabad	9:00 AM – 11:00 AM
Technical Session -3 (11:00 AM – 1:00 PM)		
Fostering Synergies between IT Based Solutions and Managerial Practices for achieving Sustainable Development Goals		
6.	Dr. H.C. Vassilakou Evangelia, Education Manager and Academic English Instructor, The English Academy of Languages, Greece	11:00 AM – 11:30 AM
7.	Prof(Dr.) Md.Sk.Shahid Ullah, Professor & Head, Dept of Microbiology, Ad -din Sakina Medical College, Jashore District , Bangladesh	11:30 AM – 12:00 PM
8.	Dr. Nawaf Abuolien, Entrepreneur from Mafraq, Jordan	12:00 PM – 12:30 PM
Paper Presentation – 3 (11:00 AM – 1:00 PM)		
Fostering Synergies between IT Based Solutions and Managerial Practices for achieving Sustainable Development Goals		
9.	Session Chair: Dr. Madhavi Sinha, Associate Professor and Head, Computer Science and Engineering, Birla Institute of Technology, Extension Center, Jaipur	11:00 AM – 1:00 PM
10.	Session Chair: Dr. Aruna Dhamija, Professor and Associate Head, Institute of Business Management, GLA University, Mathura	11:00 AM – 1:00 PM

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ABSTRACTS

BIG DATA ANALYTICS FOR RETAIL INDUSTRY

Deepak Kumar, Karvy Insights, New Delhi, India

Abstract:

Retail is the process of selling products and services through multiple channels. Retailers identify the buyer's need and deliver the product or services through a medium. The medium could be the traditional physical shops or e-commerce websites, or multi-channel. The present landscape of retail is very different from what it was some years ago. For instance, the number of touch points for a consumer has increased more than ever before. While visiting a store, a consumer does not make the purchase decision by evaluating the product or talking to a retail salesperson. They use multiple information sources like browsing the web on their phones to compare prices, reading product reviews, checking in with an immediate network like friends and family, visiting social media pages to gather more information about particular products or services. In this process, the consumers generate a lot of data for future consumption or use the data to make their current decisions. Thus from the customer point of view, the purchase journey, including researching product, quality, price, convenience, availability, etc. leaves a lot of data traces

On the seller side and in the retail ecosystem, there are several strategic decisions to be made. Some of these include analysis of the current market scenario, understanding the customer, benchmarking of competition, supply chain process efficiency, channel & distribution strategy, pricing and placement of products strategy, etc. All of this relies on some data. Thus, both seller and customer use several data points at their respective levels in their buying/selling journey. The number of sources available and used has also increased manifold at both ends.

The large amount of customer data collected through the point of sale and other sources can help in producing valuable insights for retailers. Earlier, the retailers provided the product to the customer basis on the requirement mentioned at the point of sale. But the scenario is different now - retailers can use the previously collected data and behavior of a cohort of consumers and predict the customer choices well in advance, even before buying the product. As a result, the data is growing exponentially in terms of volume, velocity, veracity, and value. These insights give them understanding and an edge over their competitors.

Therefore, big data analytics techniques, Artificial Intelligence and machine learning algorithms are now used more than ever. Big data is helping retailers in inventory management, packaging, cost-effectiveness, fast transportation, forecasting the demand and customer experience. With these analytics techniques, consumer cohorts and profiling are done to a certain level of accuracy and help sellers understand the interests, choices, and lifetime value of the consumer.

In the years 2020 and 2021, due to the Covid19 pandemic, this was further amplified by the digital-first behavior of consumers. It further enables understanding and generating valuable information to serve the consumer better. Now, the brands know more about the consumers through their online behavior, which benefits both the buyer and seller. Due to this deep knowledge about consumer likes/dislikes, choices and behavior – offerings or even communication pre and post-offer can be customized, leading to increased customer loyalty and helping retailers return as repeat purchases and referrals. While the pandemic situation is improving and the economy is on recovery route, some shifts in product demand and consumer behavior are long-term changes and therefore termed as new normal for the retail industry.

The present paper promises to provide a framework for using the various big data methodologies and data science algorithms, which can help retailers make better decisions. We will review the latest Machine learning techniques that can help solve core business needs of expanding the customer base. The paper will deliver some helpful methodology for big data analytics techniques for growth and sustainability in retail.

Keywords: Retail, Big data, Artificial intelligence, Consumer behavior, E-commerce

EXPLORING RELATIONSHIP OF CUSTOMER SATISFACTION WITH HIGH CUSTOMER LOYALTY IN SELECT BANKS OF VIDARBHA

Dr. Nirzar Kulkarni, Dr. Ambedkar Institute of Management Studies and Research, Nagpur, India

Abstract:

Owing to increase in competition and growing use of technology in the banking industry consumer retention has turned out to be a totally crucial area. Banks need to pay increased attention to consumer satisfaction and additionally need to take vital action towards consumer loyalty so as to retain their customers. Banks need to additionally focus on switching cost especially since it moderates the socio-economic traits in consumer satisfaction and loyalty.

This research proposes a research model that includes the role of different consumer aspects aligned with socio-economic elements in the above stated relationship. This is a descriptive study wherein transformation of nature of a bank's interaction with customers from traditional channels which include phone and e-mail and web-based shape, from full-service to self-benefit, and from mass selling to customized selling has been analyzed. The study concludes that customer satisfaction can be one important measure of consumer loyalty.

On banking sector a lot of work in the western Indian region, has been conducted by several researchers however, measurement of customer satisfaction of internet banking has not been covered in adequate detail. This study is an attempt to manage consumer satisfaction on internet banking in a specific city of a Western Indian state for a specific time. Most studies have been carried out with five factors of SERVQUAL Model, but this study also includes the expectation of a customer which is not always part of SERVQUAL Model. So this study may be an upgrading on SERVQUAL Model advanced via way of means of study by Parasuraman in 1985. In western India rarely any research has been carried out in the past on the subject of measurement of consumer satisfaction of internet banking customers. The study fills the gap between Domestic and global level development based on SERVQUAL Model and is a pioneering study on the topic in western Indian vicinity. It eliminates the absence of any such study at an identical subject in the region. Further, it has been observed that switching costs also effect consumer loyalty substantially.

Keywords: Customer retention, Commercial banking industry, Internet banking behavior and internet services

CHOOSE AND EVOLVE YOUR WOW (WAYS OF WORKING) BEYOND AGILE

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Abstract:

As per the Project Management Institute, the definition of leadership has taken a pragmatic shift from “Influence” to “Making an impact”. PMI 4.0 is a growth strategy to address the Project Management needs of change makers.

One can be a change maker and create an impact if allowed the freedom to choose their own way of working.

All persons, teams, and organizations are unique. And the problems they face are also unique. This means that an agile framework must work the same for all, however, it is not possible. A technique that is effective for A, may not work well for B, and vice versa. Every entity (person, organisation, industry) is singular in terms of background, skills, goals, vision, mission, preferences than its contemporary entity.

There is a plethora of frameworks in the market, Lean, Scrum, Kanban, SAFe®©, but they don't address the full spectrum of complexities faced by all teams, organizations. They are one-size-fits-all frameworks. But in the real world, one size cannot fit all.

One size fits all framework provides general solutions for specific problems, which is not workable in the long run. This paper discusses a base framework that can be tailored to address the situation that is faced in the sphere of work. Disciplined Agile gives the freedom to choose, customize and tailor as per the situation. It multiplies exponentially the ability to take on more complex initiatives and lead agile teams. Disciplined Agile helps us choose the right agile approach for a given situation.

It uses the fundamentals of agile and lean approaches like Scrum, Kanban, SAFe®, and more, along with how to implement the Disciplined Agile (DA) to choose the way of working (WoW™).

DA is not restricted to a single paradigm. It provides us with choices to choose the techniques that are most suitable for the situation at hand.

Anyone can benefit from Disciplined Agile, be it in IT, Software development, education, pharmaceutical, retail, banking, or even a small-scale business owner. It gives the freedom to break the method prison and allows the team to evolve their WoW more effectively to be phenomenally agile. (Disciplined Agile helps in evolving WoW to create an impact and be a change maker.

Keywords: Project Management, Agile, Agile project management, Disciplined agile, Dynamic leadership, Making an impact, Change maker

A COMPARATIVE STUDY FOR DEEP CROWD COUNT USING CNN ARCHITECTURE-THE DEEP LEARNING MODEL

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Abstract:

To control or manage the huge number of crowd that is increasing day by day, the need arises to analyze the crowd. The paper provides a deep understanding of crowd image analysis using image processing tasks. To analyze a crowd as a whole, the study needs to perform various image processing tasks. Initially, one needs to capture a crowded image and while capturing an image various type of noise can come like impulsive noise, Gaussian noise and Brownian noise etc. To remove the unwanted noise the requirement of image restoration arises. There are a number of image restoration methods available like inverse filters, linear filters etc., but the most optimal and popular restoration technique is the wiener filter. Once the noise is removed, to analyze crowd behavior a number of techniques can be used. The deep learning based techniques plays an important role to make a fundamental base for analysis. The most primary approach and the one that provides a base for the optimal image processing task is Convolutional Neural Network (CNN). The paper discusses different types of CNN architecture like MCNN (Multi CNN) that follows the basic CNN architecture in three layers parallel, each one for the different predefined size of the crowd. Another approach is Switch CNN wherein an image can be analyzed based on the density by dividing an input image into multiple parts and selects individual part and chooses a regressor according to the density of the selected part (patch). The third discussed CNN model is the SD-CNN (Scale Driven CNN) that strategizes the CNN approach supported by the headcount of an individual from the crowd. This study also discusses cascade CNN architecture for crowd count that forms multiple clusters based on the count of crowd image. To analyze performance of each one of these algorithm the experiment conducted on the UCF_CC_50 dataset. The paper concludes that SD-CNN is the most optimal for high density of crowd count as it has 235.74 MAE (Mean Absolute Error) and 345.6 MSE (Mean Square Error). Further, the paper also presents an analytical view to decide on the best optimal technique based on Mean Square Error and Mean Absolute Error and conclude that the CSR-NET is one of the optimal techniques for crowd analysis-related actions.

Keywords: CNN, Cascade CNN, FCNN, MCNN, Switch CNN, SD-CNN, CSR-NET

IOT BASED PROPOSED MODEL FOR MONITORING AIR USING ARDUINO AND GAS SENSOR

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Dr. Leena Bhatia, S S Jain Subodh PG College, Jaipur, India**

Abstract:

The problem of air pollution has been increasing at a rapid speed due to the increase of number in vehicles, increased number of industries and urbanization. The quality of air is getting poor and poorer day by day due to the harmful gases being emitted in the air from various sources. There are number of dangerous gases and elements which are found in the air like SO₂, CO₂, smoke, benze steam, alcohol and NH₃. For measuring the quality of air currently, PPM system is used which displays and monitors the components and also their quantity on liquid crystal display and on the website. Internet of things (IOT) is a new and emerging technology that is based on the networking of multiple physical electronic equipments interconnected with each other to communicate and senses interactions with respect to the external world.

This paper analyzes the existing system for air monitoring and proposing a model that is based on IOT using arduino. The model uses a Gas sensor which will check the presence and level of CO₂ in the air in real-time and give the signals in the form of red light or/and through an alarm. This model will be useful for the detection of air pollution in the next-generation of vehicles.

Keywords: Air pollution, IOT, Arduino, Gas sensor, CO₂, PPM

EFFECTS OF DIGITIZATION ON SOCIETY WITH REFERENCE TO INCREASE USAGE OF TECHNOLOGY IN NEW NORMAL OF COVID-19 PANDEMIC

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Abstract:

The current coronavirus pandemic not only poses a large threat to the health of our population, but also has impacted our daily lives in a disorganized manner. Although most of the mainstream services are available through our accessibility to technology and internet, the constant isolation and loneliness has caused a silent uphill battle with emotional and mental health. This study will be observing the over-usage of internet as a current trend with a stark contrast of abrupt social changes that were caused by the pandemic. The focus of this study will be on the contrasting relationship between the increased excessive reliability on the internet during the pandemic with factors leading to non-strenuous changes in lifestyle. Psychosocial elements such as emotional, mental, and physical attributes have been some key factors in this study. It has become very difficult for everyone to work seamlessly without the internet. However, the adverse problems being faced by people due to the internet have become very severe. Not only the internet but also the overall digitization of the globe because of the pandemic COVID-19 has increased the level of physical, mental and emotional misbalance within the society. Henceforth, the study is carried out to explore and verify the damages done by the digitization in this pandemic. The research study aims to bring a change in the society from the point of view of the internet usage, and also give a message of changing with technology without hampering people's physical and mental health. Also, it will help the society understand that over usage of the internet will not benefit everyone, but will make them lose certain factors from day to day life. The study helps understand that be it any individual, the results tend to vary with every aspect using study. However, based on our hypothesis and data Interpretation, age is the factor which is responsible for the problems faced by the individuals. There are several other important and critical implications from the findings and overall, the impact of digitization has made people anxious and the affected the atmosphere around them, not drastically but has brought certain changes to it.

Keywords: Digitization, COVID-19, Mental health, Work from home, Lifestyle, Emotional distress, Technology, Internet

A REVIEW STUDY ABOUT DIGITAL LEARNING RESOURCES AND THEIR IMPORTANCE FOR EMPLOYABILITY IN JOB MARKETS

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Abstract:

Today, India is a fast growing economy with a significant growth of its share in world economy and development. Globalization is an important part of the international economy and education is an important part of this phase. Education in India focuses mainly on statistics, verbal communication, practical science, primary specialization as well improvement in literacy and personal skills, while innovation and only innovation going to be the driving force in times to come.

In growing competitive environment, youth of nation is required to be equipped with basic academic skills as well as polishing employ ability skills that needs rigorous training to compete at global level. Training in general begins from the scratch and ends with attainment of self defined targets and completion of objectives, which is inherently continuous and so is the case of education that begins from early stage of life and can continue whole life depending upon aptitude and dedication of learner. Learning and obtaining skills is an aptitude that works in automatic manner with relative outcomes.

Higher education in India is stagnant in terms of access and requires radical standards to deliver value and speed. A closer benchmarking with the international standards thereby ensuring not only transparency but also timely, valid and transferrable certificates towards increased employability is the need of time. This can be ensured by rationalizing and maintaining high program standards and well working on innovative pipelines and sector privatization thereby increasing competitiveness as well adding value to education including professional and doctoral education. Allowing students to enter the workforce at their own pace through exit and re-entry options using a set of required knowledge blocks and skills and abilities in one or more disciplines (large open online courses, digital learning, etc.) can further improve flexibility in the process of delivery of education. Fundamental changes are needed to prioritize service delivery, avoid complexity, establish strong corporate responsibility in services and acquire international and national capabilities so that international certification bodies and students community are benefited.

The present study explores the facts available in context of existing use of digital learning resources towards improved employability skills amongst youth of the nation.

Keywords : Skill gap, Employability skills, Higher education, Digital learning resources

INTERNET OF THINGS (IOT) IN AGRICULTURE

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Abstract:

Technology is progressing at a rapid rate, and we are becoming more technologically sophisticated by the day. One such benefit of technology is the Internet of Things (IoT), which allows us to turn on lights and fans without ever touching them. The Internet of Things (IoT) has turned our way of life on its head, becoming increasingly prevalent and beneficial in our daily lives. Smart cities, smart homes, smart transportation, and smart industries are examples of IoT-driven changes. Many important research studies and investigations are being conducted in order to improve technology via IoT. Paper discusses sensors and how they may be used to improve technology. A sensor, in the widest sense, is something that detects and transmits information about events or changes in its surroundings. Sensors are now widely employed in most of the technologies we use in our daily lives, such as self-driving vehicles, thanks to developments in artificial intelligence. Sensors are utilised in a variety of applications, including parking, driving alongside other automobiles, refrigerators, computers, exhaust gas monitoring, and electrical radiators, to name a few. There are nearly 9,000 types of sensors available. Micro-electro-mechanical-system (MEMS) sensors, touch sensors, haptic sensors, and wireless sensors are the four categories of modern sensors. Transducers incorporate radio frequency (RF) wireless sensors and haptic sensors, whereas MEMS and touch sensors are primary sensors and a bit primitive in modern days. The two mainly used sensors are : Soil Hygrometer Detection Module which detects moisture by a soil hygrometer humidity detection module. The ambient humidity has a big impact on this. The module outputs a high level when the soil is dry and a low level when the soil is wet. The sensor's terminals act as a variable resistor, whose resistance varies with the amount of water in the soil and the other one is. The DHT11 which is a basic digital temperature and humidity sensor that is relatively low in price. To measure the ambient air, it employs a capacitive humidity sensor and a thermistor, and outputs a digital signal on the data pin.

The focus of this study is to expand the usage of IoT in the field of environmental science by using artificial intelligence and robotics to detect soil-related issues and alert the user if the soil requires more nutrients or water to sustain a healthy plant.

The outcome of the study is that it facilitates an ecologically conscious approach to sustainable gardening. In a world of rapid development and scarce resources, sustainable technology is a must.

The Agriculture data is used to train the model, resulting in more efficient results. The sensor readings used to create the testing dataset, and the AI works alongside the user and company by providing the data.

Keywords: - **Internet of Things (IoT), Sensors, Micro-electro-mechanical-system (MEMS) sensors, Field of environmental science, Soil Hygrometer Detection Module, DHT11 sensor**

GREEN COMPUTING: A BETTER WAY TO USE TECHNOLOGY

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Abstract:

Since the earth is home to millions of species of life, so every life has an equal right to live on the blue planet "Earth". On the name of the success and technology human is making the earth a worse place to live on. Everyday human is polluting the earth more than yesterday. There are many reasons for increasing global warming and climate change, one of them is computers and their resources. Green Computing or Green Technology, is the solution or a better way to use Technology. Green Computing is a revolution in information technology. Computing should not be all about sound bytes and the fastest speed and accuracy to impress users and activists, but an eco-friendly or better way to use technology.

Computer and its resources have harmful effects on our atmosphere as well as handlers. The left-over of hardware constituents comprises noxious chemicals. If a computer system is left on for many hours in this situation, it will consume high electricity cost and it will exhale Carbon-dioxide in the environment. The Carbon footprints of computers and their resources are increasing day by day. Computers are producing greenhouse gases in the environment unnecessarily, in a huge amount. Under The consideration of environmental officials and governments, Green Computing is a discovery of competent and environmental computing resources, and commerce (business) from other manufacturers. In some topical years, hardware manufacturer industries have realized that going for the green (eco-friendly) computer resources is the best decision this will be beneficial in both terms: one is public relation and another one reduced cost. So Green Computing is all about conniving, engineering of disposable resources using systems, subsystems, and servers proficiently, with negligible impact on the atmosphere. For example: Now CRT (cathode ray tubes) monitors are replaced with LCD (Liquid crystal display) monitors. LCD monitors consume half of the energy of the CRT monitors.

This paper delivers a brief overview of green computing. This research paper includes methodical acquaintance of using Green computing in numerous facets alike energy efficiency, power management, etc. This paper focuses on several aspects of Computers and their resources where green computing technology can be used.

Keywords: Green computing, Reusability, Technology, Resources, Manufacturing, Environment, Recycle, Energy efficiency, Carbon footprints, Green technology

A COMPARATIVE STUDY OF DEEP LEARNING-BASED IMAGE SEGMENTATION TECHNIQUES FOR AGRICULTURE

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Abstract:

Image Segmentation involves partitioning images (or video frames) into multiple segments or objects. It is one of the most important applications of Computer Vision (CV) and is executed in wide fields ranging from Self-driving cars to Remote sensing. Recently, the huge success of Deep learning initiated many new image segmentation approaches that help in solving real-world problems. Deep learning-based image segmentation models have high accuracy and outperform traditional image segmentation models. Image segmentation using deep learning has proved itself superior in addressing problems by giving state-of-the-art results.

Amongst other areas wherein deep learning-based image segmentation techniques are being applied, one of the significant domain is agriculture. The crop disease is a nightmare for every farmer. It negatively affects the total yield and incurs huge losses to the farmers, especially broadacre farmers. The main reason for such huge losses is the failure to identify and treat crop disease at an early stage. To mitigate this problem, computer-aided techniques are used that can identify the diseased part of the plant, quantify the diseased area, and identify the intensity of the disease. Web-based information and advisory Systems for improving the quality and productivity of crops are emerging. These are intelligent models that can monitor cultivation over a distributed area. This keeps the farmer updated about the crop quality leading to a better yield. The objective of this paper is to make a comparative study between different deep learning-based image segmentation techniques to establish the best technique to solve the above problem.

The main challenges observed during this study are the non-availability of large datasets, Low-spatial resolution images which are not suitable for the training process and, temporal resolution images for live prediction. But this can prove itself one of the best compared to other methods due to its high efficiency and low cost. It is a long-term project which can help in the long run.

Keywords: Image segmentation, Deep learning, Computer vision (CV), Crop disease, Low-spatial resolution.

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NEW ERA OF CLOUD ENABLED SECURITY THREAT

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Abstract:

When evaluating the threat scenery related to use of cloud applications and services, we can assess the scale of risk from two viewpoints: the growth of the target or opportunity for attack, and the growth in attacker curiosity. New study from Netskope into each underscore just how rapidly cloud-enabled threats are rising and how leadership teams should use that information to evaluate the organization's risk posture.

Primary, usage of cloud applications in the organization continues to increase, the steady number in use increased by 20% in 2020, with cloud movement now representing 53% of enterprise cyberspace traffic. This growth comes mainly from personal apps and apps with a "Poor" Cloud Confidence Index™ (CCI) rating, meaning an application that puts complex data at risk. These figures visibly show that the chance for attack is rising, and that organizations without a clear plan for mitigating threats enabled by cloud activities are at significant risk.

Another thing, cybercriminals continue to misuse cloud services, specially those from the most current and renowned public clouds. Cloud service area lend legitimacy to attacks, with malicious actors using dependable areas and legal certificates to exploit user trust and evade detection. This paper discusses about the current cloud threats.

Keywords: Cloud security, Current threats, Cyber criminals

SQL INJECTION ATTACKS, DETECTION TECHNIQUES ON WEB APPLICATION DATABASES

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Abstract:

Most of web applications Database are vulnerable to SQL Injection Query Attacks which lead to entry the sensitive data directly through client side. They work by entering malicious SQL Injection Query codes through the web application on client side and cause return all the sensitive and private data from the database.

SQL Injection is a technique where the web attackers post the malicious SQL injection Query with specific end and goal there is to change the structure, behaviour of the Query proposed by the computer programmer and occupying up the full admin login access of the web database, for malicious Input data modifications or deletion of the existing user User's Information. The SQLi attacking method is an important web application attack, Using this technique, attackers execute or run evil SQLi queries or an arbitrary code on the database servers using the web application to gain full access over the sensitive and Private Data on the database by bypassing authentication level.

According to the owaps (Open Source Foundation for Application Security), the SQLi ("SQL Injection") attack is mentioned as major Database Security Issue.

The SQL injection attack (SQLi) is the web-based vulnerability that allows the web attackers to spoof the identity, destroy the data presented on the database server, Insert new entry in the database and change the records presented on the database. The SQLi attack, misuses security loopholes issue happening in the backend database of an application, SQLi attacks is the most commonly-known Web security issue or vulnerability in Web-Based Application and Database nowadays.

The major issues of SQL Injection (SQLi) includes loss of users confidentiality and authentication problems, Authorization Issues for user and loss of Data Integrity as any sensitive information may be changed by any unauthorized user.

In (SQLi) attack there are three main types of SQL-injection attack ie. In-band (classic (SQLi) Attack), inferential-SQLi (blind-(SQLi) attack), and Out-band SQLi Attack. In the Classic-SQLi Attack, the attackers use the same channel of communication that is used by authorized user to launch attacks & extract the results. The Attack can be in a form of generating errors on the database or use UNION operation to integrate mulvalue Select statements to get a only one single database as HTTP Response in web application.

In inferential SQLi, the attack depends largely on the response & behavioral patterns of the database application to understand the overall Structure of the web database.

In the Out- band, SQLi Attack is performed only when certain features are Active on the web database servers.

There are other procedure methods that have been proposed by researchers to prevent or detect SQL injection attacks. This paper will include comparative study of advance methods and tools to detect SQL injection query attack.

Keywords: Web application security, SQL injection, SQLi threat, Spoofing, Authentication bypass, Firewall, SQLi attacks, SQLi poisoning

THE MEDIATING ROLE OF ABSORPTIVE CAPACITY INFLUENCING TRANSFORMATIONAL LEADERSHIP IN RAJASTHAN BASED STARTUP ENTREPRENEURS

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Abstract:

In the light of Covid 19 Outbreak, the business environment which was really dynamic even before has incorporated huge uncertainty as well and thus the concept of leadership has also evolved and changed drastically during the course of time. Nevertheless, the assumption that organizational culture seems to provide a strategic advantage is therefore no longer a possibility. Due to the rapidly changing personality traits, concept of transformational leadership has recently attracted considerable attention among Startup to a great extent. Because of the global market's competitiveness, businesses have shifted their focus towards innovation. It takes personnel under the existing business environment to acquire and integrate knowledge externally and internally and interestingly to develop an entrepreneurship environment that aims to build innovation requires transformation. Transformational leadership is a leadership style in which leaders encourage, inspire and motivate employees to innovate and create change that will help grow and shape the future success of the company is accomplished by setting an example at the executive level through a strong sense of corporate culture, employee ownership and independence in the workplace. Recently, a well-structured concept of transformational leadership has gain popularity among business due to its dynamic characteristics.

This Present study aims to define the links of transformational leadership with corporate entrepreneurship or Startup & absorptive capacity for Rajasthan based startups. The previous studies have tried to understand the relationship between corporate entrepreneurship and performance, while considering the moderating effect of transformational leadership, and they have showcased the enhancement of entrepreneurial spirit due to the impact of transformational leadership, especially in the case of modern day businesses where leadership plays a significant role. This study aims to find the relationship between transformational leadership and corporate entrepreneurship through an incorporation of scattered insightful work on transformational leadership, absorptive capacity, and corporate entrepreneurship under one framework.

The study is based on primary sources in the form of Survey, where, 230 responses were received. For measuring the parameters of the study, developed scales were used for designing survey questionnaire. Every statement of question was tested and after running reliability statistics then confirmatory factor analysis (CFA) was performed by using SmartPLS-3.3.0 to test the hypothesis and conceptual model of research. For testing, since, survey questions were based on psychometric properties, where, the constructs were developed and tested to ensure the validity. The investigation of the study clearly showcases the acceptability of all the alternate hypotheses, where, it can be said, that "transformational leadership" has constructive effects on "corporate entrepreneurship" with mediating role of absorptive capacity. The present study is descriptive in nature.

Keywords: Transformational leadership, Absorptive capacity, Startup entrepreneurship

COMPARATIVE ANALYSIS ON VIRTUAL PRIVATE SERVER V/S SHARED HOSTING

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Abstract:

The server gives the most fundamental administrations when it comes to distributing the sites. There are a few angles that give the office to have their sites to the server that is shared hosting or virtual private server. A VPS and shared hosting is an area of hosting websites to the server. The VPS is made of a completely private environment and the Shared Hosting is the part of that environment that provides the facility of hosting.

The virtualization innovation gives a physical server to be virtualized into various virtual servers to have their sites. The virtual private server is coherently working independently even though physically situated on similar equipment. In this paper, we discuss the comparison between shared hosting and virtual private server. A virtual private server that has an over-burden can get memory assets from another virtual private server that has a fewer remaining tasks at hand furthermore, it has memory unused. Along these lines, high accessibility administrations can be utilized. Shared hosting is a sort of web facilitating in which different sites store on a particular web server. Essentially, shared hosting has a few execution and security issues in contrast with a virtual private server.

In default, the mutual facilitating arrangement, all site's contents are executed under the webserver's client account paying little to their proprietors. In this manner, a site is ready to get to other sites' assets and this isn't occurring in a virtual private server because the availability is diverse for each client to assign their site. This paper aims to examine the comparative study between the virtual private server and shared hosting and investigating the security issues and execution for the facilitating sites.

Keywords: Virtual private server, Memory, Shared hosting

IDENTIFYING THE ROLE OF META-COMMUNICATION IN HUMAN-COMPUTER INTERACTION WITH RELATION TO USABILITY ENGINEERING

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Abstract:

The importance of software is continuously increasing in our day to day life and needs to be developed at a fast pace based on the requirement. Also the human interaction has been changed the outcome of software in terms of quality, time and cost. The major problem is to choose the best suitable software development model. In general, selection criteria should be either the shortest time or the minimum cost with the efficient change management process. The waterfall model was the most conventional method, which further enhanced towards iterative models. And an iterative waterfall model was introduced for iterating back the single model approach. This was not fully capable in handling the rapid changes in fulfilling the user requirements and change in base technology. Thus agile development process model was introduced to bridge the gap with an iterative and incremental approach. This model has started providing a rapid software delivery. The usability engineering and human computer interaction is mainly focused while doing the rapid development. Usability engineering is an area which is concerned to the planning of human computer interfaces to achieve user friendliness i.e. software efficiency with user satisfaction. This leads to perform specific tasks for specific users. Humans and computers interact and form the flow of information which is defined as the loop of interaction. While observing HCI engineering, researchers categorized HCI in (i) Approaches of user task analysis for the analysis of interaction with humans; (ii) Functional concepts and its management; (iii) Policies and standards for user interface designs; (iv) Requirements validation and verifications procedures and (v) Prototypes used in process. After a proper software development process software specialists also find software defects that are caused by human errors even after early error elimination and proper test-cases. Here researchers paid attention on meta-communication and its role in software project processes. Meta-communication is communication about communication; meta-message is a message about a message; meta-language is language about language. Non-verbal indications like voice tone, gestures, face manifestation and body language are a part of meta-communication that incorporate the significance of communication that either enhance or disallow what we say in words. This paper discusses the ideas on the software quality improvement by the integration of the human factors engineering into the software development process using Meta-communication improvement methods. This paper presents the issues faced by software development team while iterations are occurring during whole development process and makes the process hard to handle.

Keywords: Human-computer interaction, Usability engineering, Meta-communication, HCI, HCI engineering

CANCER PREDICTION AND DETECTION USING SUPERVISED MACHINE LEARNING

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Abstract:

Artificial Intelligence (AI) mimics the human brain and works as efficiently as human brain works. The AI is being used in various applications including Natural Language Processing (NLP), Healthcare systems, Computer Vision (CV), Robotics and many more such smart and expert systems. Healthcare systems require artificial intelligence in detecting, predicting, diagnosing and treating diseases more rapidly. AI increases the ability for healthcare professionals to better understand the day-to-day patterns and needs of the people they care for, and with that understanding they are able to provide better feedback, guidance and support for staying healthy. Artificial Intelligence in the field of medical provides early diagnosis of the disease with much more accurate results and endow with the prediction of the disease by diagnosing symptoms at early stage of the disease. It suggests the best treatment depending on individual's current physical state. Machine learning as one of the AI technique, can be applied for treatment, management and prediction of diseases. As per World Health Organization (WHO) reports, second leading cause of death globally is cancer. As research outcomes, it is found that around 10 million people die every year globally from cancer. Artificial Intelligence can be used and implemented for predicting and treating cancer which would save life of many people. Implementation of Artificial Intelligence in healthcare could improve the accuracy, prediction, diagnosis, management and treatment of cancer. By patients mammogram deep learning systems are able to predict cancer risk. Such mammogram can be used as inputs to detect and predict the cancer risk of the patients very near the beginning so that appropriate treatment can be well-timed given to the patient. Healthcare Institutions can use these systems in diagnosing, predicting, managing and treating cancer patients. Artificial Intelligence can help oncologists for better prediction and treatment of cancer patients at earliest. The proposed study aims to predict and detect cancer at very early stage through building a supervised model. The model is trained using a set of patient's mammogram which has an accuracy of 90% as per the research of Artificial Intelligence for predicting, diagnosing and curing cancer patients. The results exhibit reasonably good performance and accuracy.

Keywords: Artificial intelligence, Machine learning, Prediction, Artificial neural network (ANN), Deep learning, Computer vision (CV), Natural language processing (NLP).

FAKE NEWS DETECTION ON TWITTER

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Abstract:

Fake news has become a crucial subject of research in varied fields, including semantics as well as computer science. Social media subsidized to the broadcasting of data in a lot of dynamic method. Culture produces and consumes data. People obligated to know how to understand information critically. Twitter is one in all the well-known social media applications which are free and cross platform services for sending and receiving program messages. Therefore, this paper describes a technique for programming to detect fake news on Twitter.

This research pointing to link Big Data Analysis and Media Literateness, in order to detect fake news in the selecting family. The main challenge in this research is to collect collecting qualitative data and identifies the fake news on Twitter. The widespread spread of fake news is likely to have a very negative impact on peoples and society.

Detecting fake news on Twitter offerings exclusive features and challenges that make current detection algorithms from traditional news media incompetent or unimplemented. The reason to choose Twitter for detecting fake news is because Twitter is more likely to contain ambiguous and destructive information interrelated to anything.

In the past years large social media networks like Twitter declare that there are fake and identical accounts, fake news and fake likes on their network. With these accounts, their creators can allocate false information, support or attack an idea, product or election candidate, while manipulating actual network users in decision-making. This research paper describes how to present our system build sight recognize fake users and fake news in the Twitter social network.

Well Known Machine Learning algorithms are used to classify tweets, which are characterized by a feature value vector that is extracted, selected and pre-processed from the datasets and mainly around the use of language interchanges. Fake news can have a significant undesirable impact on society due to the amplified use of mobile devices and enlarged Internet penetration around the world. A simple mathematical model is used to understand the online spread of fake news.

To detect fake news different methods and techniques are used for detecting the fake news. Features extraction is used to extract and signify useful information from social background, Features for predicting accuracy is used to predict accuracy that fall across four types: Structural, User, Content and Temporal. Twitter-specific properties of the tweet stream, includes tweet volume and activity distribution. User features capture properties of tweet authors, such as interactions, account ages, friend/follower counts, twitter verified status. Data collection and pre-processing is used to collect Twitter data includes news reports that have been verified to be authentic. During collection, tweets are labelled automatically by their source, that is trusted or untrusted source, and train a classifier on this dataset. Classifier is used to classify fake and non-spurious tweets.

Keywords: Fake news, Natural language processing, Data extract, Twitter, Prediction.

A SYSTEMATIC ANALYSIS OF THE NEED FOR QUALITY MOBILE APPLICATION DEVELOPMENT

Peeyush Pareek, Rajasthan Technical University, Kota, India

Abstract:

A good quality mobile application is liked and downloaded by every user that fits the requirement. As per Statista 2021, over 3.2 billion smartphone users are present worldwide and 88 percent of mobile time is spent on mobile applications (apps). From the trend of Mobile apps revenue generation from 2014, they are expected to generate revenue of over \$935 billion by 2023 according to Statista report of worldwide mobile app revenues in 2014 to 2023, this indicates an incrementing scope of application development. Although the Apple store has 1.96 million apps and 2.87 million apps are available at Google Play store for a user to download. Quality application development looks simple, but in reality, it is not, the app developer can develop the best app, but if no one downloads and uses it, it's not worthy. So before development, one must conduct proper research like other application developments, and also during the development process quality steps should be considered.

This paper's introduction section illustrates the mobile application and its quality parameters to be considered for application development. It also explains the structure of the mobile app, its layered architecture, platforms, and different types of mobile applications. The review section includes the systematic review conducted for the study of quality mobile application development. The study of application development platforms, tools, frameworks, and the need for testing mobile applications is also part of this section. Various testing techniques that can be applied to mobile applications for better quality are discussed in this section. For a better understanding of testing techniques, a comparison is presented in a tabulated manner. Keane's recommended strategy for testing is also considered for a better understanding of various approaches of testing, their testing types, and consideration for manual and automated testing.

The comparative analysis section presents a tabulated report of the papers considered, their work, and the methodology followed. This section presents a table based on Kane's strategy for a better comparison of testing types. Finally, the key points to be considered for developing quality mobile applications are its responsiveness, focus purpose, consistency of experience, less startup time, and customized interactions with off-device information source and future research points to be considered for application testing includes the need of proper and automated testing of mobile application are the part of the conclusion section.

Keywords: Software engineering, Mobile application, Quality application, Testing techniques, Mobile application Testing

PLANT LEAF DISEASE CLASSIFICATION USING DEEP LEARNING TECHNIQUE

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Abstract:

In India, agriculture plays a major source in the economy. Hence it is necessary to work on high-quality agriculture production to maintain economic development. Therefore, it is important to increase the agriculture throughput by decreasing such diseases through tracking the plants' life cycle. The traditional oversight followed by farmers is time-consuming, and much expertise and adequate monitoring are needed to understand the plant situations. Therefore, it is necessary to automate the diagnosis and detection of plant disease process to improve the overall efficiency and save time. Numerous researchers have developed systems based on different approaches. The continuous use of deep learning procedures with image processing methods for recognition of plant disease has become a major subject for review to give a programmed analysis. This research proposes a technique to provide productive plant disease based on pre-trained deep learning models, such as Alex Net (CNN architecture). We hope this study will provide comprehensive understanding to identify future research solutions on the plant leaf disease.

Keywords: Plant Leaf Diseases, Deep Learning Models, Image Processing, CNN Architecture Alex Net.

AGILE CHANGE MANAGEMENT

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Abstract :

The term 'Agile' is a phraseology in the present advanced world which is interpreted differently in different contexts. However, in the context of an organisation, the term 'Agile' is generally perceived as a mechanism for bringing about a faster change and getting ideas to market ahead of the competition. It has recently been acknowledged as a competitive advantage and strategic plan for a business entity. In fact, at a macro level, it is regarded as a mechanism, though it is a cultural change. It is argued that it is the approach of thinking and behaving rather than a mere process. Nevertheless, approaches in agile adoption have grown exponentially as it answers the uncertainty concept in business. Agile delivery methods are concerned with iterative delivery, to generate a return on investment as early in the lifecycle as possible. Agile delivery is a method of delivering products and services in a more timely and efficient manner.

In the present scenario of complex management paradigm, it has become crucial for an organisation to be agile as this is a continuous socio-technical process for the longevity of business entities. Well defined strategies with an appropriate framework would go a long way in achieving this. It is a transformational process that takes a long time for the business entities to consider its complexities. The Agile development process with draconian quality management is triggered by the changes that are sparked by the customers and competitors of an organisation. Agile transformation requires organisational transmutation wherein the business establishments are exposed to challenges. Various studies have emphasised on adoption of agile methods and deterrents in the process. The primary purpose of the present paper is to highlight various dimensions of agile transformation process, agile efficiency and quality based changed management from a broader landscape. It also endeavours to substantiate that the master key for organisational success lies in clearly defining the agile change management strategies rather than mere agile adoption itself. This blueprint should contemplate all facets of changing approach to ensure that it strengthens the attainment the agile transformation process through substantive transformation experiences. Applying the agile approaches and practices in the distributed environment will lead to gain a lot of benefits such as reduced costs, higher efficiency and better customization. However, few researchers have addressed the problem of requirements changes during the development process in distributed agile development. Most of the published research in this context on industrial experiences, increasing the need for combining the industry with academia within this area. This paper introduces a method for managing requirements changes in distributed agile development. By combining industrial practice and academic techniques, the proposed approach bridges the gap between industry and research in distributed agile development. This method is based on a proposed feature model known as a features tree. The method is accompanied by a supporting software tool that aids in the management of requirement changes in distributed agile development. The supporting tool has been tested and evaluated in real-world settings using a comprehensive set of criteria, and promising results have arrived.

Keywords: Agile, Agile adoption, Agile transformation, Organisational transmutation, Change management strategy, Substantive transformation

CSR ROLE IN PANDEMIC (A STUDY ON CSR ACTIVITIES DONE BY BANKING SECTOR IN PANDEMIC COVID-19)

Dr Neha Jain, Jaipur, India

Abstract:

Corporate social responsibility (CSR) defines the ethics, rules, regulations, societal welfare activities which should be followed by the each and every organisation working in the society and for the society. It is the promise of the business entities to give their best efforts in its operations to make balance in society, environment and economy and fulfil the customer's expectations. It mentions their duties towards their employees, stakeholders, customers and public. It shows the relationship between the organisation and society. In today's scenario where intense competition exist in the market, CSR activities became an important and necessary work to survive in the market. It builds a positive image of the company in the eye of society and their customers. Doing welfare works for their society, stakeholders, customers would not only help to go business at big level but also helps in the long-term growth and success of the organisation. The origin of corporate social responsibility is not new, but its welfare practices are changes according the changing requirements and needs of the business and society. The key role of CSR is to make company's brands popular among the rivals of the company, media houses, and other organisations. So, to attain competitive advantage and for a sustainable growth, each sector gives their contribution in the economic, societal, environmental development of the nation. Majorly these CSR involve planting trees, clean and green environment projects, electricity to village, employment, child's education, orphanage welfare, save girl child campaign, fight against hunger, old age home, green and eco-friendly products, and many other kinds of activities. In present Pandemic situation when coronavirus stopped everything and back our economy by many years, CSR work of the business houses support the Indian economy and helps to overcome from this situation in any manner. Where hospitality, hunger, shelter, travelling, jobs are the major requirements in current situation, these institutions provide their help in many ways to fight against this situation and help to the needy ones. Number of business institutions and organizations are doing welfare activities in Pandemic and these activities are carried out at individual level also, but my study focus on how banking sector take initiative in CSR activities to fulfil the needs, requirements of the society in this covid-19 situation. As banking sector is the largest sector in India play crucial role in the development of the country. Along with this sector also go for green banking where everything is becoming online today. Paperwork is decreased and customer do his all-banking activities through online banking or mobile banking. The purpose of this paper to flashing light on those banks which plays tremendous role in facing this Pandemic situation and give their contribution to stabilize the economy of India. Although various banks take initiative in these welfare works but this paper studies top 5 banks working in India from many decades and do CSR work not only this Pandemic but also from many years.

Keywords- CSR, corporate citizenship, Pandemic, business ethics.

HQL-QUERY OPTIMIZATION TECHNIQUES FOR BIG DATA USING HADOOP'S MAPREDUCE FRAMEWORK

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Dr. Preeti Tiwari, International School of Informatics & Management, Jaipur, India

Abstract:

According to the Digital Report of Jan, 2021, 5.22 billion Mobile Phones, 4.66 Internet and 4.20 billion Social Media users are surrounding the world. This report clearly shows the huge range of digital data produces each and every second. This heterogeneous and massive data is known as Big Data, is measured in terabytes or petabytes. It is difficult to the current breed of conventional relational databases to handle enormous volume, heterogeneous variety (structured, semi-structured and unstructured data) and velocity (high speed data) of Big Data for data analytics. These traditional relational databases are based on Relational Model, was built by Edgar Codd in the 1970 for IBM, Oracle Microsoft etc. Basically, this model was used for handling data in the Relational Databases, but it is still in widespread use today and plays a significant role in the development of Big Data. Initially systems and organizations were used On-line transaction data processing (OLTP) system and user interfaces for capturing the data. At present nature of data is changed, these OLTP system and user interfaces are managed web and mobile based transactions like- client services, billing, refunds, shipment delivery, inventory control etc. In order to take the real-time unstructured data to present the performance of the business, historical data is needed. In other words, it can be said that there is a need for integration between unstructured data and traditional operational data. It is not easy to use relational databases for Big Data, but it is beneficial for the applications and systems to rely on the data stores in relational database management system to built the utmost level of business in the Big Data environment. To handle SQL based structured data queries, Hadoop is one of the prominent and well suited solution that allows Big Data to be stored and processed. It is a cluster based open source distributed data processing framework that allows the Hive tool to handle SQL like queries on Hadoop. Hive is an efficient tool for batch processing. It was developed by Facebook in 2009, later maintained by the Apache Software Foundation, and first Apache Hive was released in 2012. It uses HDFS (Hadoop Distributed File System) for storing processes data and MapReduce is an execution engine that execute Hive SQL based query. Hive is an ETL and data warehouse technique that uses HQL(Hive Query Language)for processing on structured data on Big data, similarly SQL language in relational database. Query Optimization techniques are play an important role in SQL-based queries to improve the query performance and reduce execution time. Hive is the first SQL-engine on the top of the Hadoop provides a various query optimization techniques like partitioning, bucketing, join algorithm, join ordering etc. Join is one of the expensive operations in the query processing. Join order play a significant role in the query optimization because when change the order of tables in joining operation, it's reduce execution time of the query. This paper focuses on the study of the algorithms for generating optimal join order during query optimization phase.

Keyword: Big data, Hadoop, Hive, HDFS, MapReduce, Query optimization technique

THEORETICAL ANALYSIS OF WAGE INEQUALITY IN INDIA

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Abstract:

Wage inequality is reality of Indian labour market. The purpose of this paper is to review, approaches related to wage inequality. Wage inequalities refer to disparities in distribution of wages among population or individuals. Wage inequality is considered as biggest economic challenge in now days and comes with wide pay gaps between individuals. Attention of this paper has been focused on some basic issues of wage inequality such as; wage inequality among regular and casual workers in rural and urban areas and gender wise wage gaps in India. Wage inequality exists between workers engaged in different sectors and gender wage discrimination also has been long discussion in labour market. Despite, increase in the share of women worker in world labour market, gender inequalities are observed, and there is a wide pay gap between male and female workers. This paper provides review about, wage inequality among regular and casual workers and gender wage differentials in public and private sectors in rural and urban areas, by utilizing National Sample Survey(NSS) 68th round (July 2011- June 2012) of Employment and Unemployment survey. Besides, the study has gone for examine some factors which are effecting wage inequalities such as; education, experiences and knowledge etc.

Keywords: Wage inequality, Gender wage discrimination, Public and private sector, Rural and Urban

GREEN INTERNET OF THINGS (IOT): A REVIEW

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Abstract:

The Internet of things (IoT) and its applications are immensely used in recent years. IoT connects everything in a smart world. A smart world where objects like (watches, mobile phones, computers, trains, buses, and computers, etc.) are connected to create a network. IoT is where billions of interconnected devices are connected throughout the world. Internet of things is used in various domains, such as in industries, smart traffic systems, smart homes, smart healthcare systems, smart farming, smart cities, smart lighting or smoke detector, gas detector, and many more. The concept of IoT allows people and places to communicate with each other and anything and any-time. This results in huge power. The main functionality of IoT is to sense the data from its surroundings and collect the data and transmit all those data to the cloud system, due to this vast amount of sharing of data between billions of IoT devices large amount of energy is wasted in the form of heat and it creates massive energy need that is harmful for the environment. Thus Green IoT is designed to minimize energy usage by IoT devices. The history of green information and communication technologies (ICT) that enables the green IoT shall be discussed in this paper. The idea of bringing down energy utilization and keeping the environment clean and safe can be done by the Green IoT. It is also performing an important role in creating a healthy and smart planet. Green IoT is considered as the eco-friendly future of the Internet of things. This paper, discusses the benefits of Green IoT and how ICT help in green IoT. The paper also focuses on the lifespan of green IoT that involves green layout, green usage, and green reuse. In addition to studying of the various IoT applications, the advantages, challenges of green IoT are also discussed. The aim of this research paper is to make a green environment using technology without any harm to nature and people that contribute to a sustainable application world.

Keywords: - Internet of things, Green IoT, Green computing, Smart phones, Smart cities, GIoT, Green IT

CUSTOMER SEGMENTATION OF A RETAIL STORE USING RFM ANALYSIS

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Abstract:

Customer Segmentation is a practice of categorizing the customers into certain groups on the basis of their Psychographic, Technographic, Behavioral, Geographic, and Demographic traits. Segmenting the customers makes marketing and customer care more targeted and organized. It helps in targeting the right audiences and allows us to identify the marketing campaign for different segments of customers.

RFM Analysis is a technique of customer segmentation. This marketing strategy is use to analyse the customers on the basis of 3 parameters- Recency, Frequency and Monetary. This analytical approach, assigns RFM rank to each customer on the basis of their purchasing habit. The rank could be on a scale of 1 to 10 or 1 to 5. The highest RFM ranking customer is considered as the most promising one. This tool helps us to answer the questions like- How likely a company retaining the customers or how frequently company is getting the new customers. On the basis of RFM scores, It can be identify about the best customers and make efforts to retain the customers that are likely to shift to another competitor.

This paper focuses on creating a RFM Model for customer segmentation of a online retail store. The segmentation is done using Python programming and the results are visualized using Microsoft Power BI. Using this, further it can be categorized the customer into the following: New Customers, Promising ones, Champions, Loyal Customers, Potential Loyalist, Need Attention, Hibernating, About to sleep, At Risk, Lost Customers and so on. This classification allows us to focus on a set of customer at ones. Using this approach, company can personalize marketing messages to more effectively nurture prospects down the funnel.

Keywords: Customer segmentation, RFM analysis, Marketing strategies, RFM model, Online retail, Target customers

DATA SECURITY AND PRIVACY PROTECTION IN WEARABLE DEVICES USING MACHINE LEARNING MODEL: A SURVEY

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Abstract:

Now a day's Healthcare is one of the most important aspects of every human being. Wearable devices are playing a significant role in everyone's life by giving real-time data related to user's health like several steps, behavior, sleep, and mood. A wearable device has added a new dimension to the medical system by providing real-time data that helps in monitoring human body conditions constantly. This monitoring helps those patients who are suffering from chronic diseases. The data generated from wearable devices have great social and commercial value as well. These wearable devices connect hospitals and patients through IoT and sensing technologies to create a medical network. As wearable devices can also collect user data like location, time and upload all the data on the cloud that may be easily accessible by any unauthorized person which may create a problem for the users. There are many guidelines, standards, and rules for wearable device security and privacy. These Regulations are not very strict and manufacturers do not follow the rules. The users are also contributing to this, as they are not aware of different threats and vulnerabilities of the devices. There must be strict rules for wearable devices to maintain security, privacy, and data stored in the device. Machine Learning Models are also being used to make user data more secure. By leveraging data, these models or algorithms can be trained to better diagnose the health of a person wearing a smart device. There are various algorithms that can be applied to train the model like linear regression, regression tree, Gaussian process regression, support vector regression, and ensemble tree.

This paper discusses the various security and privacy issues of Healthcare wearable devices and how the machine learning model can be used to protect data security and user privacy.

Keywords: Wearable devices, Machine learning, Healthcare, Data privacy, Data security

GRAMMAR CHECKER WITH OCR IN MOBILE

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Abstract:

Smartphones have been known as most commonly used electronic devices in daily life today. These are no longer just a communication device but also considered as a powerful computing device which are able to capture images, videos and a lot more.

An application which recognizes text from an image is no longer an innovation. Keeping this in mind an idea is proposed where a user can find grammatical errors in a scanned file with the help of OCR (Optical Character Recognition) and show results with utmost accuracy. OCR is the conversion of images of typed, handwritten or printed text into machine - encoded text. The OCR technique involves character recognition. The research work proposed, works upon detecting errors in the recognized text with the help of several algorithms.

There are number of tools and online portals for grammar check and OCR respectively such as grammarcheck.net, grammarly.com, onlineocr.net, ocr.space, IRISPen, etc. The proposed research focuses on combining both the techniques digitally on a mobile platform and achieves maximum accuracy in grammatical error detection. According to prior work, two methods of detecting grammatical errors in a sentence have been popular. The first method is to generate a complete parse tree of a sentence to identify errors. The second method is rule based checker that detects sequences of text and do not appear to be normal. The method which leads to maximum accuracy will be used in detecting errors from sentences.

The application of proposed work can be in educational institutes or for an individual who can check for grammatical errors within seconds instead of reading the whole paper. The users will be able to evaluate their text and re-check for any errors too. In educational institutes teachers and other evaluators will be able to check their student's answers for any grammatical errors that will also help in increasing their grading speed with some percentage.

Keywords: Grammer checker, Optical character recognition, Language, Grammer

A COMPARATIVE STUDY ON HADOOP MAPREDUCE AND APACHE SPARK FRAMEWORK FOR BIG DATA ANALYTICS

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Abstract: In today internet world, due to the current advent of new technologies, mobile devices, and communication media like social networking sites, the amount of data generated every year is growing at a very high rate. The growth of this generated data is beyond our imagination. It is impossible to store these huge data sets in RDMBSs like MySQL, as there is no specific formats of the data and that can be in either text or image formats. It require the need of technologies which can easily manage and process huge volumes of structured and unstructured data in real-time and can protect data privacy and security. Big data technologies like MapReduce, Apache Flume, and Apache Spark can capture, store and analyze this huge amount of data in very efficient and less costly manner. Spark and MapReduce programming frameworks provide an effective open source solution for managing and analyzing the Big Data. MapReduce is a high-performance distributed Big Data programming framework. It processes the data in batch processing environment. On the other hand, Apache Spark is a scalable distributed in-memory data processing engine. It processes the data in both batch and real time environment. It uses Resilient Distributed Datasets (RDD) and Directed Acyclic Graph (DAG) for data processing. In this paper, a review on Hadoop MapReduce and Apache Spark have been made by comparing them on various parameters like performance, streaming, fault tolerance, storage, language support, and reliability.

The organization of paper is as follows: Section 1 describes the concepts of Big Data and its technologies. Section 2 covers related work done by different researchers to compare these two programming frameworks. Section 3 discuss the working model of both the programming frameworks. Section 4 provides a comparative analysis of Hadoop MapReduce and Apache Spark on basis of different parameters. Finally, the paper is concluded in Section 5. The study confirms that Apache Spark outperforms MapReduce by a dramatic margin, and as the data grows Spark becomes more reliable and fault tolerant. Spark performs far more better than MapReduce. It demonstrates that Spark will become a possible replacement of MapReduce in the near future.

Keywords: Big data analytics, Hadoop MapReduce, Spark framework.

A REVIEW STUDY OF BLOCKCHAIN PLATFORM FOR LAND REGISTRY

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Abstract:

Global changes and advancements in technologies go hand in hand. Every time a new global problem arises there is a technological solution awaiting the same. And most of the new advancements are there to deal with the public domain industries, mainly impacting the living of the people. One of such public domain problem that has been there for past many years is Property frauds. Every year only in India there are numerous forgery and property frauds cases that shows up. Because of the lack of proper end-to-end Land records management systems, Land Ownership has risen up as a challenge to the Real Estate Industry. Presence of the uncertainties in ownership claims hinders the robust functioning of the financial institutions to a great extent. To avoid property fraud cases the Block chain technology can be applied.

This paper aims to provide a possible solution to computerize all land records, including mutations, including transparent land records management system, update all the settlement records and maximum possible reduction to the problems of land disputes along with providing clear titles of land ownership that could be monitored easily by government officials as well as tracked back to any point in the land's history of transactions. Also the roles of the middleman will be significantly reduced by the implementation of the proposed framework. In this paper, it is shown that how Ethereum block chain platform along with angular JS has been used to implement decentralized application.

Keywords : Technological solution, Property frauds, Land records management, Block chain, Ehtereum, Angular JS

ROLE OF NGOs IN IMPLEMENTATION OF SDGS WITH SPECIAL REFERENCE TO WATER ISSUES IN RURAL RAJASTHAN

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Abstract:

The north-western state of Rajasthan is the largest Indian state with an area of 3,42,239 sq. km comprising of the 10.41% of the total geographical area of the country. The highlighting feature of this arid and semi arid state is that it is gripped with the problem of water scarcity, deteriorated quality of available water, Change in climate, rapid growth in population, change in life style of people, urban advancement, industrial evolution and environmental impairment. Under these circumstances it is essential to understand and find novel ways and techniques to develop and improve the good quality water resource. By adopting best suited method of waste water treatment and best suitable use of treated waste water, we can reduce the unhealthy, unsanitary and mismanaged, careless condition of the water resources. Need of the hour is to take the right steps toward managing and improving this most valuable resource for the sustainable habitat on Earth.

The current study is concerned with the water resources management in arid and semi-arid regions of rural Rajasthan. Rajasthan state is chosen in present study because of its dreadful conditions in terms of water resources. In this paper an effort has been made to comprehend and analyze the existing sustainable development models for restoring and improving the conditions of present water resources, adopted by some of the NGO's and study the impact of such methods in restoring water resources of rural Rajasthan in fulfilling the water requirement for different purposes.

The paper revolves around the progress and work done by three NGO's working to transform lives of the people living in rural areas of Rajasthan through adoption of integrated approach through sustainable development in the areas of safe drinking water and reinvigorating the traditional systems of water management. These are - Ambuja Cement Foundation (ACF) operating in Rabriyawas, Marwar Mundwa and Chirawa, areas that are all located in Rajasthan. Tarun Bharat Sangh (TBS) with headquarter in Bheekampura, Alwar, Rajasthan. Gramin Vikas Vigyan Samiti (GRAVIS), working in the Thar Desert, Rajasthan, Uttarakhand, and Bundelkhand regions of India. The majority of GRAVIS' work falls under moderating drought effects caused by the water crisis in the Thar Desert.

Keywords: Sustainable habitat, Semi arid state, Environmental impairment, Integrated approach

GLOBAL FINANCIAL CRISES AND THE AFTEREFFECTS TO THE WORLD ECONOMY

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In the modern financial system, a large part of wealth remains deposited in long term financial assets which yield returns slowly over a long period of time. Financial crises arise when large number of investors tries to liquidate their long-term investments due to panic and lack of trust in the financial system or the government. The global economy suffered a recession which arose from a financial crisis in US in 2007-08. Economists and researcher's world over exerted to understand the dynamics of factors causing the crises and enumerated number of causes like oil prices, inflation, global saving glut, weak regulatory mechanism etc apart from housing bubble which was earmarked as the primary cause. Apart from these, Crotty in 2009 also identified that the imperfect institutional structures and systems which are widely known as "new financial architecture" also has significantly contributed towards the widespread penetration of the financial crises. The after effect of the global financial crises is still seen on the economies and the focus is not to let such financial and economic disasters happen again. Various economic and mathematical models are being developed by researchers and experts to study the dynamics and inter connection of factors involved in the financial crises to frame a robust financial system which can mitigate (if not eliminate) effects of any further financial crises. As has been stated by Comert and Ugurlu (2015), although the global financial crises effected the entire globe equally, the developing countries endured it relatively well and thereby the relative impact of financial crises on them were relatively less. However, the inter connection between the nations of the world today (owing to open economic system) compels the policy makers and regulators across the world to infuse robustness in the financial systems and structures so that the shock waves arising from any economic or financial crises can be sustained. It is, therefore, vital to study the causes and the contributing variables and to cure the ruptures in the financial structures and systems that were highlighted by the crises. In this light, the current paper tries to conduct an elaborate study into the causes and thereby chalking out the after-effects of the crises. The first section of the paper will discuss the causes of the financial crises along with their current implications. In the second section of the paper, the after-effects of the crises will be discussed.

Keywords: Global saving glut, Recession, Financial crises, Financial structure

A COMPARATIVE STUDY OF MACHINE LEARNING ALGORITHMS

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Rajasthan Technical University, Kota, India

Abstract

In this era of Artificial Intelligence (AI), Machine learning is being utilized in many real life applications like in on our phones, for searching results, in spam protection, for the web pages that generate actionable insights, database server that detects suspicious transactions, and speech recognition etc. The design of algorithms capable of producing broad patterns and hypotheses by using external given cases to forecast the fate of future instances is known as supervised machine learning techniques. The goal of supervised machine learning technique is to categorize data based on prior knowledge. Everywhere around us has been changed into a machine in recent years and these have become an indispensable element of our daily lives. Machine learning is now being used in practically every industry in the globe. To solve real life problems, a number of successful strategies have been presented, including norm techniques, logic-based techniques, specific example techniques, and stochastic methods. As a result, understanding each and every pace of machine learning is critical. In this study, a detailed comparative analysis of various machine learning algorithms is done to find out suitability of their applications and performance in terms of accuracy and time required. For the comparison two small data sets are taken. It is observed that supervised machine learning algorithms outperforms unsupervised learning algorithms in most of the cases.

Keywords: Machine learning algorithms, Supervised learning, Unsupervised learning, Semisupervised learning, overfitting

EDUCATIONAL DATA MINING FOR PREDICTING STUDENTS' ACADEMIC PERFORMANCE

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Abstract:

Institutions of higher learning are often very curious to know about the level of achievement of the students throughout their study. Because educational databases include such a large amount of data and predicting performance becomes more difficult. As a result, they must employ a variety of strategies for predicting student's success, including physical assessment, statistical methodologies, and modern data mining methodologies. Data Mining is a useful technique for assisting students academically. Educational Data Mining is the term for mining related with education data. Educational Data Mining is a branch of research that focuses on analyzing educational data to uncover intriguing patterns and information in educational institutions. Educational data mining is focused with the development of novel ways for extracting knowledge from educational databases for use in educational decision-making. With the help of prediction method a model can be constructed which can be used to predict students' performance. Students' academic and family backgrounds can be used to make predictions. Different Data mining techniques can be used to predict student's performance. It includes techniques like classification, clustering, association rule mining. This study explores a number of elements that usually consider influencing students' performance in higher education. It also predicts the performance of students related to personal and social aspects. This study also presents challenges, opportunities and future scope of data mining techniques in education domain. Using educational data mining approaches, it could truly improve student's attainment and success more effectively and efficiently. It has the potential to help students, instructors, and academic institutions.

Keywords: Educational Data Mining (EDM), Classification, Clustering, Data Mining, Predictio

SOFTWARE FAULT PREDICTION TECHNIQUES: AN ANALYSIS

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Abstract: The prediction of software failures is aimed at identifying the error prone software modules through some low level properties of the software project before a particular test method is started. It helps to obtain the quality of the necessary software with the best cost and the effort. The software defects forecasts are highly demanding software tests. This paper, considers and analyze the various dimensions of the fault prediction process in the software. Analysis and predictions of automatic software defects are important areas of software engineering in today's scenarios. For decades, many of these systems have been introduced. But there was always space for new contributions. In recent years, the demand for automated systems by automatic learning technology has increased. Therefore, it includes the natural language processing fields (NLP), ML and artificial intelligence (AI). This paper helps to recognize several factors related to the process of predicting failures and discuss many problems related to the prediction of failures in the software. Many digital libraries recovered and searched all related items. Software defects prediction systems mainly follow the procedure for data collection, preprocessing, functions and selection, training and metric performance evaluation. The curve (receptor operating passion) (AUC), accuracy, accuracy, accuracy, memory and measures of F1 are evaluated mainly in such systems, and this research has variety of research questions (RQ) focused and Designed. This paper is designed to use and analyze several existing prediction systems. Software metrics, failure prediction technology and data quality are the main problems in this area. We also enter the classification of several technologies and other observations of each category. Reviews for various software defects prediction models show theoretical and procedural aspects of recent approaches in the prediction of software defects using ML technology. This paper have compared many existing methods of software prediction and analysis systems. According to the primary evaluation criteria, and then obtained many important findings and observations. These criteria are characteristic, metrics, classifiers, data sets and precision. At the end of the document, This paper includes the statistical analysis, observation, tasks and future directions for the prediction of faults in the software.

Keywords: Defect Analysis, Fault-prone, Prediction, Machine Learning, Software Project.

CSR THROUGH SDGs – COLLECTIVE EFFORTS, INCLUSIVE GROWTH

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Abstract:

To address the environmental and socio-economic setbacks and achieving sustainable and inclusive growth globally, the United Nations (UN) adopted SDGs i.e. Sustainable Development Goals or Global Goals in the year 2015, to advance together sustainably. The goals were hands-on adopted by the 193 member nations in their national policies and various development strategies, but the plan of 'Sustainable development' needs to be implemented at the grassroots level to make it a success by the targeted year i.e. 2030, herein the corporate sector can play a major role by bringing into line their CSR strategies with the Sustainable Development Goals. This paper strives to understand the need for aligning CSR with UNSDGs, and identify the contribution of companies in India in the implementation of SDGs, simultaneously figuring out the maximum addressed SDG and which goal is still struggling to deepen its roots. Data from annual surveys and reports have been utilized to address the research questions and the findings deal with the challenges faced by the companies in aligning CSR strategy with UNSDGs and the real impact of this endeavour.

Purpose- This paper strives to understand the need for aligning CSR with UN SDGs, and identify the contribution of companies in India in the implementation of SDGs, simultaneously figuring out the maximum addressed SDG and which goal is still struggling to deepen its roots.

Design/Methodology - The study is based on the Data extracted from annual surveys and CSR reports produced by NITI Aayog, and other authentic sources of information. The inferences have been utilized to address the research questions.

Findings - the findings deal with the challenges faced by the companies in aligning CSR strategy with UN SDGs and the real impact of this endeavor.

Originality - The originality of the study lies in the part, which reflects the fact that more emphasis has been given to address a conventional goal, rather than allotting equal efforts and budget. As CSR and UN SDGs are gaining importance as a part of the business strategy of companies, studies have been conducted to ascertain the equation of UN SDGs with CSR programs of the corporate; this study specifies the maximum addressed SDG and which goal is still struggling to deepen its roots.

JEL categories - M14

Keywords – Corporate social responsibility (CSR); United nation (UN); Sustainable development goals (SDGs); Global goals

COST EFFECTIVE ELECTRONIC DATA MANAGEMENT FOR “ELDER CARE PROJECT” IN RESOURCE-CONSTRAINED ENVIRONMENTS: SCALABILITY AND IMPACT OF ODK

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Abstract:

Background: ODK is open-source software for collecting, analyzing and reporting data specifically in low resource settings. It allows for off-grid electronic data collection with mobile devices in far-flung areas and has interoperability with lot many related software products including Ona, Enketo, SurveyCTO and KoBoToolbox..

Because ODK allows data collection in demanding contexts it is intended to be applied for underprivileged to identify their needs and launch community driven interventions based on the aggregate data. In this paper, the researcher discusses use of ODK in collecting and managing data of senior citizens belonging to low socio-economic stratum. Whenever internet connectivity is available submission of collected data to a server is performed allowing communities to have comprehensive data with complete control.

Elder Care Project: Introduction : By 2050, the elderly population is anticipated to account for around a quarter of the total population as per statistics. As a developing nation and with the challenge of lower levels of disposable income India will have to adapt to the needs of an aging population.

The Elder Care Project was launched with a vision to improve the physical and social support systems of the aged underprivileged groups and to focus on their physical and mental well being. It is a project by NSE Foundation which undertakes CSR activities of the National Stock Exchange of India Limited with emphasis on enhancing the well-being of marginalised and underprivileged communities.

It was in early 2019 that The National Stock Exchange of India Ltd (NSE) signed pact with NITI Aayog to enhance the quality of life of citizens by providing education, safe drinking water and sanitation, and elder care in three districts of Karauli in Rajasthan, Ramanathapuram in Tamil Nadu and Nandurbar in Maharashtra. The Aspirational Districts Programme aimed at aligning on-ground stakeholders and administrative systems towards betterment of crucial indicators of human and social development.

CECOEDECON with over four decades of experience had undertaken interventions to resolve the unfulfilled needs of its partner communities under five interdependent themes namely Basic Rights, Economic Justice, Livelihood Security, Institutional Development & Civil Society Building and Food and nutritional support was chosen for this project in Rajasthan.

A strategic partnership was instituted between NSE Foundation and CECOEDECON to improve the quality of life of aged underprivileged groups through “Elder Care Project” in Karauli district of Rajasthan.

Methods: Literature search was undertaken using Microsoft Academic, PubMed, and Google Scholar. In addition, current schemes and guidelines particularly for senior citizens including those by Government of India, and articles from various non-academic sources (e.g. websites, recent news, etc.) were reviewed.

KoBoToolbox, developed by the Harvard Humanitarian Initiative, a user friendly and robust tool for data collection in demanding contexts was used for current study. It was employed by the researcher because it provided easy form creation facility by utilizing intuitive form builder and provided the option of reusing existing questions and building complex forms with skip logic and validation. Moreover it also helped in making data available right away without any data loss even in long interviews and also synchronized data via SSL so that the data cannot be accessed by a third party.

Under “Elder Care Project” data was collected on various socio-economic variables including economic status, source of income, health parameters, habits, physical limitations, financial investments, memberships (ESHG, Senior Citizen Association, etc) education, number of dependants, type of dwelling, facilities (drinking water, toilet, Gas connection), etc. The study was conducted from December 2020 to May 2021.

Results: Enhanced platform of open tools was used to collect and manage data from more than 10,000 respondents from Karauli district of Rajasthan by ten field investigators..These data were used to analyze the current living conditions of elderly and to increase interventions to improve the quality of life of the elderly during pandemic crises.

Conclusion : Open-source developments will expand the functionality of a varied range of data collection platforms (Commcare, KoBoToolbox etc.) that are based on the ODK software.

Keywords: ODK (open data kit), KoBoToolbox, Elder care project, NSE foundation, CECOEDECON.

ENTREPRENEURSHIP SUCCESS: AN EXPLORATORY STUDY

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Abstract:

The purpose of this research is to map and analyze the success of entrepreneurs who started and runs a gazelle company, and if and how this has changed over time as the company developed. This study is also focusing on in seeing whether the empirical reality corresponds to the theoretical frame of reference that exists around success in entrepreneurs. The objectives of the current study are to analyse the various aspects of entrepreneurial success by exploring the impact of various factors affecting entrepreneurial success, also, to empirically investigate entrepreneurial success.

The study is based on both primary and secondary research. The theoretical basis for the study is based on the success attributes from the lens of entrepreneur's psychology with a deep dive into the reasons of entrepreneur's motivation. The study discusses literature review based on three elements, - the profile of the entrepreneur, the business environment and preparation for creation.

Additionally, for collection of Primary Data the questionnaire was shared with 60 respondents via email among which a total of 52 responses were received. Two of the responses were incomplete so a total sample size of 50 was considered for the analysis. The collected data was statistically analyzed using SPSS. Furthermore, the study had carried out a multiple regression analysis to examine the dependency of entrepreneurial success on 4i Model from Dutta and Crossan (2005). The 4i model of entrepreneurship involves the processes of intuition, interpretation, integration and institutionalization and occurs over three levels: individual, group and organizational. Correlation analysis was done to evaluate relationship between the components of relationship marketing and customer loyalty. The data collection has taken place through a survey of founding entrepreneurs for established companies.

The linking of the different variables using multiple regressions also allowed the confirmation of the dependency of entrepreneurial success on the intuition, interpretation and integration of the entrepreneur. It was identified through the data analysis that the 4i model adopted in this study can be used perfectly to analyze the success of entrepreneurs. This investigation gives experimental proof on the elements influencing entrepreneurial success, along these lines contributing information to the subject. Among others, the strict obligation/genuineness factor is seen as the best factor to impact entrepreneurial success.

Keywords: Entrepreneurship, Entrepreneurial Success, Cognitive Styles, Relationship Marketing, Entrepreneurial psychology

AN ANALYSIS OF DIFFERENT NETWORKS

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Abstract:

A network is a group of devices connected by links where each device is a node. A node is often a computer, printer or, other devices capable of sending or receiving data to other nodes. Links that connect nodes are referred to as communication channels. Devices are connected by telephone cable, virtual cables, or visible connectors so that they can interact easily. Communication between the 2 devices is often established using simplex, half-duplex, or full-duplex mode. Most networks use distributed processing, during which work is split into smaller segments between multiple computers. Rather than using one processor, many processors are made to complete one task. The network should be ready to operate, be reliable, and secure. A network is often divided into four categories, usually supported by its size. There are four types mainly LAN (Local Area Network), MAN (Metropolitan Area Network), WAN (Wide Area Network), and PAN (Personal Area Network). Every network has its structure these network structures are called topologies. The type of topology are bus, tree, mesh, ring, star, and hybrid. The network use two type of models namely "OSI" and "TCP / IP". The OSI model represents an open system interconnection. The OSI model was developed by ISO (International Standard Organization) in 1984. The OSI model has seven layers and the TCP / IP model has five layers. The TCP / IP model was developed before OSI. The foremost common layers are OSI and TCP / IP application layer, network layer, data-link layer, transport layer, and physical layer TCP / IP model. During a client-server network, the central server is employed to store data. While in Peer-to-Peer, each peer has his data and within the customer-server network, the server responds to customer requests while during a peer network, each node can make both requests and answer services. During this case, a network concept is going to be developed.

Keywords: - Network, Communication channels and modes, Distributed transmission, Network channels, Network split, Topologies, Network model, OSI model, TCP / IP model, Peer-to-peer, and Client- server.

EMPLOYEE ENGAGEMENT GOING GREEN: ISSUES, PROBLEMS & PROSPECTS

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Abstract:

An ecosystem is a territory of living organisms in association with the non-living components of their environment, interacting as a system. The fundamental objective of sustainable development is achieving balance between the exploitation of natural resources for socioeconomic development, and conserving ecosystem services that are critical to everyone's wellbeing and livelihood. A healthy mind needs a hale and hearty body, healthy body requires a healthy environment that could be possible in a healthy planet. Data revealed the fact that India scored 168 out of 180 countries in the year 2020 in Environment Performance Index (EPI- is a biennial index that quantifies and numerically ranks the environmental performance of a country). Some of the indicators used by EPI are Environmental Risk Exposure, Air quality, Air pollution, Water and sanitation, Drinking Water Quality, Ecosystem vitality, Green innovation etc. hence it highlights the problems in environment and provide guidance to move towards a sustainable future. Industries although help in progression of Indian economy, but also responsible for deprivation of environmental balance. Now it is the prime responsibility of corporate leaders to protect our nature and save the planet Earth.

Green Human Resource Management (GHRM) is concerned with the involvement of policies and activities in the field of HRM that involve all workers in accepting and implementing sustainable practices and enlightening awareness about eco-friendly lifestyles. Green HR leads to increase Business Goodwill, various eco-friendly activities, higher efficiency, lower cost, a healthier workplace and heightened employee engagement and retention. Green HR initiatives can be promoted through green culture and green teams at the organisations. Green team consist of group of workforces who are involved in advancing sustainability within an organization. The task of these teams is to find out the sustainable opportunities within the organisations and to educate and train employees to take initiatives for environment friendly activities and come up with innovative solutions of the problems.

Green HR initiatives that can enhance employee engagement can be remote working, meetings through video conferencing, rewarding employees contributing for environment friendly activities, invite suggestions and appreciate participation of employees for green culture.

The aim of this paper is to understand the role of green initiatives adopted by corporates to attain Sustainable Development Goals (SDGs) for all living beings and to find out the employee engagement practices adopted by leaders as Green HR initiatives. Also the researchers wishes to understand challenges and opportunities that arise due to the transition from traditional practices to green HR practices with special focus on employee engagement practices.

Keywords: - Green human resource management, Sustainable development goals

SECURITY ASPECTS OF CLOUD COMPUTING: A REVIEW

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Abstract:

In the current era where storing large amounts of data on the local computers has become very hard and it leads to large amount of operational cost, maintenance of the resources to overcome these kinds of problems a solution is implemented known as "Cloud computing". Cloud security also plays an important role in cloud computing. Without cloud security Cloud theft, leakage, and deletion like problems can be occurred.

Cloud computing comes into existence because moving to cloud computing may reduce the cost of managing and maintaining IT systems as rather than purchasing expensive systems and equipment for the business. Cloud computing can reduce the costs by using the resources of cloud service provider. It can scale up or scale down the operations and storage needs quickly to suit the situation, allowing flexibility as per requirement. It also provides business continuity by protecting from natural disasters, power failure or other crises. Cloud security is fundamental for the numerous clients who are worried about the wellbeing of the information they store in the cloud. Be that as it may, information put away in the cloud might be safer in light of the fact that cloud specialist co-ops have unrivaled safety efforts, and their representatives are security specialists. On-premise information can be more powerless against security penetrations, contingent upon the kind of assault. Other considerations are maintaining the security of data in the cloud extends beyond securing the cloud itself. In real life examples if we are using cloud computing then we have very ease as all things as a whole are stored at one place and we can easily access them whenever we want or needed and no need to maintain the infrastructure. Also provides with the high level of security which prevents from any type of unauthorized access. This paper aims to describe cloud computing and its security features. It also focuses on how cloud computing helps the society.

Keywords: Cloud computing, Security, Cloud theft

AN INSIGHT INTO NEW ROLE OF IT IN ENTERPRISES

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Abstract: As now the technology is evolving day by day, it is contributing significantly in every sphere of life, and enterprises is no exception. The emergence of technology has greatly affected the business scene. Digitization has transformed in business world. Today's companies not only rely on information technology, they can't survive without it. IT is integrated into products, it pulls priceless information from customer data, and it is the force behind online shopping. Information technology fosters innovation in business. IT departments are experiencing tremendous changes as their roles expand to impact customer service, sales, and even business strategies. IT is the key generator of online shopping. IT helps the enterprise to grow day-by-day. The demand of the new digital economy has made IT more essential to business success than ever before. Small businesses use bunch of technology i.e., everything from servers to mobile devices – to develop competitive advantages in the economic marketplace. In small business, IT support in reducing the business costs. And it also assists in maintaining the records and data in very efficient way. IT also expand the business by marketing on social media .IT improves the planning. IT support in better decision making. IT improves the customer support. IT aids the people in meeting the new people from other cities and expand their own business. IT allows businesses to easily hold virtual meetings with staff and clients around the world without having to spend time and money on travel. IT assist in resolving the issues we never faced in local business. IT encourage the enterprises in implementing the new technology in their business. Every business is now thinking about ways to enable digital selling and customer self-service. IT allows companies to expand internationally as easily as setting up a multi-language website that markets to global customers and allows purchases in multiple currencies. Companies can use online recruitment to find more qualified job candidates and handle most of the hiring process online. Digital technologies can create and help innovate services and processes that will allow your customers to utilize your products and services more efficiently without leaving the house. A variety of mobile apps, email processes, web self-service capabilities, digital document technology and electronic signatures can be developed and implemented to keep internal operations and revenue flowing when normal processes are negatively impacted. Here's an example: Many transactions for banks, insurance companies and other financial services have gone online to make business easier for customers. However, opening an account with a bank traditionally requires a new customer to show up at a branch to sign the required forms and paperwork in person. Transforming those documents into digital PDF forms with fillable fields, e-signatures and electronic identity verification can allow new customers to sign up for services without showing up at the branch. In this research I will spell out the role of IT in enterprises and how it is changing day-to-day and how it is become motivation of small business people and they are also investing in that by many ways.

Keywords: Information Technology, Enterprise, Transformation

CLOUD COMPUTING & SECURITY

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Abstract:

In the current era where storing large amounts of data on the local computers has become very hard and to do so we need a large amount of operational cost, maintenance, health check of the resources so, to overcome these kinds of problems a solution is implemented known as “Cloud computing”. On the other hand when cloud computing comes into picture then its greatest factor cloud security which is “Cloud security is the protection of data stored online” also comes in existence because on cloud all things are publicly accessible on the internet so, also to overcome this problem we need to implement various security factors like Cloud theft, leakage, and deletion. Methods of providing cloud security include firewalls, penetration testing, virtual private networks (VPN), and avoiding public internet connections. Cloud computing comes into existence because moving to cloud computing may reduce the cost of managing and maintaining your IT systems rather than purchasing expensive systems and equipment for your business. One can reduce his/her costs by using the resources of cloud computing service provider, they can scale up or scale down their operation and storage needs quickly to suit the requirements, allowing flexibility as the needs change. It also provides business continuity by protecting from natural disasters, power failure or other crises. Cloud computing uses deployment models like SaaS (Software as a Service), PaaS (Platform as a Service), IaaS (Infrastructure as a Service) to provide the high processing ability to end-clients. Whereas on the other hand. Cloud security is fundamental for the numerous clients who are worried about the wellbeing of the information they store in the cloud information on the cloud is be because cloud specialist make unrivaled safety efforts, and their representatives are security specialists. On-premise information can be more powerless against security penetrations, contingent upon the kind of assault. Other considerations are maintaining the security of data in the cloud extends beyond securing the cloud itself. Cloud users must protect access to the cloud that can be gained from data stored on mobile devices or carelessness with login credentials. Another cloud security issue is that data stored on a cloud-hosted in another country may be subject to different regulations and privacy measures. In real life examples if we are using cloud computing then we have very ease as all things as a whole are stored at one place and we can easily access them whenever we want and that too without the need to maintain infrastructure. Also provides with the high level of security which prevents from any type of unauthorized access. In this research cloud computing and its security and about how it's affecting our society is discussed. Also as per the data it is evident that cloud computing will continuously expand as it provides vast levels of advantages.

Keywords: Cloud computing, Security, SaaS, PaaS, IaaS

A SURVEY ON QUERY OPTIMIZATION TECHNIQUES IN MOBILE DATABASE

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Abstract:

The emergence of mobile computing provides the ability to access information at any time and place. However, as mobile computing environments have inherent factors like power, storage, asymmetric communication cost, and bandwidth limitations, efficient query processing and minimum query response time are definitely of great interest. A Mobile database uses wireless technology to allow mobile computers to connect to its System. The database consists of a client and server that connect to each other over the wireless network. Due to the vulnerability of wireless network signals, a cache of activity is maintained to ensure that sensitive data/information can be recovered. Mobile or Cloud computing usually consist of three components, within a wireless network a mobile database will have one or more Base stations. These stations are responsible for controlling the communication signals that need to be passes from one host to another. A base station receives and sends information and often come in the form of some type of wireless router. Hosts are responsible for handling the actual transaction that occurs within a mobile database. Different Types of mobile database include Sybase SQL Anywhere, Oracle Lite, Microsoft SQL server compact, IBM DB2 Anywhere and SQL Lite.

The general architecture of a mobile platform is a distributed architecture where a number of computers generally referred to as FIXED HOSTS and BASE STATIONS are interconnected through a high speed wired network. Fixed hosts are general purpose computers that are not typically equipped to manage mobile units but can configured to do so. Base Stations functions as gateways to the fixed network for the Mobile Units. They are equipped with wireless interfaces and offer network access services of which mobile units are clients. Queries provide content-based access to discover the various information and services across a network or in the database. The user obtains objective information by sending the relevant query to the database, which is processed by the database engine and sends the query result back to the user. In general, query processing involves the following steps: interpretation and transformation of the global query; use of local cache; and transformation to location specific queries. Query optimization is intended to improve the efficiency of query evaluation procedures. The effects of mobility on query processing need algorithms that are capable of managing frequent disappearance and appearance of the mobile device in the network. This paper elaborates on the classification of queries in mobile databases in three main categories: location-dependent queries, location-independent queries and location aware queries. The paper also focuses on various Mobile Database Query Optimization tools and techniques for efficient data access.

Keywords: Mobile Database, Query Processing, Query Optimization

IT-ENABLED ENTERPRISES: UPCOMING SUSTAINABLE MODELS

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Abstract:

Technology in business is a growing necessity. As the years go by, the business world is leaning more and more toward it, making it almost impossible to separate the two from each other. Innovation breeds business, and since technology plays the way for it, hence that business needs technology to be sustained. Business has always existed since the early times of man. Even though it only began with the simplistic exchange system, business would not be the same as it is today without the advancements in technology. All the major industries would fall into a disastrous collapse if one were to take away technology from business, since majority of business operations and transactions somehow involve the use of technology. The role of technology in business caused a tremendous growth in trade and commerce. Business concepts and models were revolutionized as a result of the introduction of technology. This is because technology gave a new and better approach on how to go about with business. It provided a faster, more convenient, and more efficient way of performing business transactions. Applications of technology in business include accounting systems, management information systems, point of sales systems, etc.

With the automated processes that technology can provide, productivity reaches a higher level. This is due to the minimal resources consumed in processing business activities, allowing room for better products produced and faster services delivered to more clients and customers. Information is also stored with ease and integrity. With this, confidential and sensitive information are less prone to vulnerabilities. The requisite information can also be instantly retrieved and analyzed to monitor trends and make forecasts, which can be crucial in decision-making processes. Business involves communication, transportation, and more fields, making it a complex web of processes. The technologies pertaining to other fields pushed business further. Globalization has been possible due to the wonders of technology. Anyone can now do business anywhere from within the four corners of his then room. Technology in business enabled a wider reach in the global market. The basic example is the Internet, which is now a common marketing tool to attract more consumers in availing products and services offered by various businesses. Technology in business ultimately made living worthwhile. It cannot be denied though that technological threats to business are growing rampant, such as hacking and other malicious activities, so one has to be responsible enough in utilizing the power of technology. The good that technology brings has some excess baggage in the form of bad things that threaten to shake the business world. In the end, it is the responsible use of these that would further allow us to enjoy the benefits that technology can bring. This paper studies the impact of recent technology trends on business.

Keywords: Enterprise, Business solutions, Security, Information Technology

ROLE OF IOT IN HEALTH CARE

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Abstract:

Health is wealth are the golden word that were hear by everybody in our life at any point of time. As the technology increases there are many smart devices and also mobile technology in the health care sector results are significant on the worlds . Potential development of new smart and powerful devices for monitoring of individual's health, health experts are taking advantage of these technologies to improvement in the healthcare. By the use of these devices a normal person is also able to know about their pulse beat, blood pressor, diabetes. IoT allows integrating physical devices capable of connecting to the Internet and provide real-time health status of the patients to doctor Even when the doctor is out of station one can take doctors advice on call or video call. Also in some of the critical cases doctor & advice other doctors to oprate on the patient. And also some mobile based and web – based application ,based on questionnaires, have already been developed to monitor the health of individuals. Some of the mobile applications are used to work like their sending the warning message to the relatives of the patient so they can come and look after the patient. IoT is thus proving to be a boon for patients are health care workers. This paper attempts to provide a comprehensive analysis of the use of IoT in health care sector.

The main concept of a network of Smart device was discussed as early as 1982, with the modified coco-cola vending machine and in 1991 Mark Weiser paper on ubiquitous computing “The computer of 21st century”. The term “Internet of things” and the term itself appeared in a speech by Peter T.Lewis to the congressional Black Caucus Foundation 15th annual legislative weekend in Washington D.C, publish in September. The extensive set of applications for IoT devices is often divided into consumer commercial, industrial and infrastructure space. These include Consumer applications such as , Smart phone, Elder Care, Organization applications including, Medical and Health care, Transportation, V2X Communication, Industrial applications like Manufacturing agriculture, Food, Maritime, Infrastructure application as Metropolitan scale deployment, Energy management, Environment monitoring and Military applications that may include Internet of Battlefield things(loBT), Ocean of things.

It has been very important for every one in current scenario to obtain latest information about what is happening around us .Also information about weather natural calamity ,and other thing are necessary .Through this we can able to get knowledge about anything that we want to know also about health ,manufacturing, agriculture, food now it is very important in every field to be get updated along with the time. There are number of serious concerns about danger in the growth of the IoT especcaly in the area of privacy and security and consequently industry and government moves to address these concerns have facilitated the use of IoT.

Key words: **IoT, healthcare, healthcare infrastructure, smart devices**

PARALLEL AND DISTRIBUTED COMPUTING

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Abstract:

Parallel and Distributed Computing has made it possible to simulate large infrastructure like Telecoms, air traffic in an effective way. It not only makes processes faster and reliable but also provides geographical distribution of data and processes among the systems. Due to its great capabilities it has led to diverse of research in this field. This has also led to many types of computing paradigms like grid computing, cluster computing, utility computing and cloud computing. Some modeling techniques can be PES, the system modelling, performance modelling and network modelling. Parallel and Distributed Computing uses multiple processors and share the same memory to execute the required computations. Parallel and Distributed systems use different models and modeling techniques for research and development. This paper reviews some of the advances in the modelling and simulation aspect of this field. The Simulation Techniques and software like SimOS, SimJAVA and MicroGrid are also discussed and evaluated. The paper then goes deeper into its latest form, cloud computing.

Keywords:- Parallel and Distributed Systems (PADS), Parallel and Distributed Computing, Discrete Event Simulation (PES), Modelling & Simulation.



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The institute has bagged first prize in the institutional category in Rajasthan Energy Conservation Award for the year 2018 by Department of Energy, Government of Rajasthan. The institute has acquired 4.5 stars out of 5 for its Institution Innovation Council, established as per the norms of Innovation Cell, Ministry of HRD, Govt. of India to promote Innovation and Startup in campus during the calendar year 2019-20. Furthermore, the institute has been consecutively ranked first in the category 'A' for the academic sessions 2017-2018, 2018-19 and 2019-2020 by Rajasthan Technical University, Kota, for its MBA and MCA programs on the basis of Quality Index Value (QIV) score. It has also been ranked first in category 'A' for its MBA program in 2020-21 & is placed in category 'A' in 2020-21 for its MCA Programme. The institute has also been able to achieve distinguished ranks among all the institutions in India, in the surveys conducted by agencies such as CSR-GHRDC, Indian Management and Business world.



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