TECH PULSE

2021- 2022

VISION

TO EMERGE AS A CENTER OF TECHNICAL EXPERTISE IN THE FIELD OF COMPUTER SCIENCE AND ENGINEERING BY PRODUCING GLOBALLY COMPETENT PROFESSIONALS WITH TECHNICAL & RESEARCH CAPABILITIES, ETHICAL VALUES AND TEAMSPIRIT.

MISSION

1 TO PRODUCE QUALIFIED AND COMPETENT SOFTWARE PROFESSIONALS.

2 TO INDUCE APPLICATION ORIENTED AND RESEARCH CAPABILITIES IN STUDENTS FOR THE BETTERMENT OF SOCIETY

3 TO INCULCATE ETHICS AND HUMAN VALUES IN STUDENTS SO AS TO ADAPT TO THE DYNAMISM IN THE FIELD OF COMPUTING TECHNOLOGY.

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TECH PULSE

PEO-1

TO PROVIDE STUDENTS WITH A STRONG FOUNDATION IN THE MATHEMATICAL,SCIENTIFIC AND ENGINEERING FUNDAMENTALS NECESSARY TO FORMULATE, SOLVE AND ANALYZE ENGINEERING PROBLEMS.

PEO-2

TO DEVELOP AN ABILITY TO ANALYZE, DESIGN AND DEVELOP NOVEL ENGINEERING SOLUTIONS.

PEO-3

TO MAKE THE STUDENTS RESPONSIBLE WITH ETHICS, BEST PRACTICES, VALUES AND SOCIAL CONCERNS TO MEET EQUIREMENTS OF RESPONSIBLE TEAM PLAYER IN THE SOCIETY

Dr. M Radhika Mani

Professor & HoD of CSE,

Pragati Engineering College

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My vision is to develop constructive thinking and analytical capabilities of every student of the department of CSE. Our department is fully committed to provide students with a strong,broad based fundamental engineering education and prepare the students for a career in the industry, teaching and nationwide laboratories. We also plan to develop entrepreneurial skills in students so that they would propel the spirit of growth of our economy and would be able to generate employment opportunities for other qualified and skilled persons. I personally look forward to integrate my experience of over 10 years in teaching and research into the learning systems and use my skill along with the collective efforts of the other faculty members of the department to build a comprehensive methodology that helps us to nurture the young minds. I look forward for prepare the students to face the challenges of technology that the engineering sector would offer in the future and guide them in offering technological solutions for the betterment of the society and our nation.

Wishing all our students brilliant and bright future.

"If you think technology can solve your security problems, then you don't understand the problems and you don't understand the technology."

— BRUCE SCHNEIER

- Telecommunication providers and technology companies around the world have been working together to research and develop new technology solutions to meet growing demands for mobile data from consumers and industrial users.
- Fifth-generation (5G) mobile technologies represent the next iteration of mobile communications technologies that were designed to improve current (e.g., 3G, 4G) mobile networks.
- 5G networks are expected to provide faster speeds, greater capacity, and the potential to support new features and services.
- 5G technologies were developed to accommodate the increasing demands for mobile data (i.e., more people using more data on more devices).
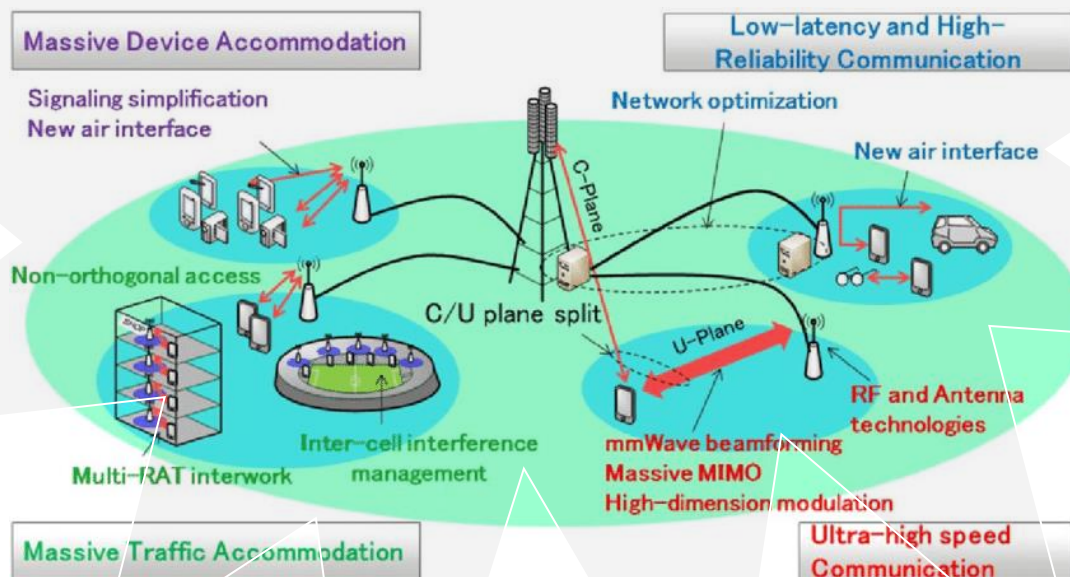
Investigation on 5G Technology:

- 5G is a pillar of digital transformation; it is a real improvement on all the previous mobile generation networks.
- 5G brings three different services for end user like Extreme mobile broadband (eMBB). It offers high-speed internet connectivity, greater

bandwidth, moderate latency, UltraHD streaming videos, virtual reality and augmented reality (AR/VR) media, and many more.

- Massive machine type communication (eMTC), it provides long-range and broadband machine-type communication at a very cost-effective price with less power consumption.

- eMTC brings a high data rate service, low power, extended coverage via less device complexity through mobile carriers for IoT applications.
- Ultra-reliable low latency communication (URLLC) offers low-latency and ultra-high reliability, rich quality of service (QoS), which is not possible with traditional mobile network architecture.
- URLLC is designed for on-demand real-time interaction such as remote surgery, vehicle to vehicle (V2V) communication, industry 4.0, smart grids, intelligent transport system, etc. 5G faster than 4G and offers remote-controlled operation over a reliable network with zero delays. It provides down-link maximum throughput of up to 20 Gbps.
- In addition, 5G also supports 4G WWWW (4th Generation World Wide Wireless Web) [5] and is based on Internet protocol version 6 (IPv6) protocol.

5G Applications:

1. High-speed mobile network*: 5G is an advancement on all the previous mobile network technologies, which offers very high speed downloading speeds 0 of up to 10 to 20 Gbps.*

2. Entertainment and multimedia*: In one analysis in 2015, it was found that more than 50 percent of mobile internet traffic was used for video downloading.*

3. Internet of Things—*connecting everything: the 5G mobile network plays a significant role in developing the Internet of Things (IoT).*

4. Healthcare and mission-critical applications*: 5G technology will bring modernization in medicine where doctors and practitioners can perform advanced medical procedures.*

5. Satellite Internet*: In many remote areas, ground base stations are not available, so 5G will play a crucial role in providing connectivity in such areas.*

Understanding Virtual Reality and Augmented Reality

M. PRIYANKA - - 20A31A05E7

We spend a lot of time looking at screens these days. Computers, smartphones, and televisions have all become a big part of our lives; they're how we get a lot of our news, use social media, watch movies, and much more. Virtual reality (VR) and augmented reality (AR) are two technologies that are changing the way we use screens, creating new and exciting interactive experiences.

Virtual reality uses a headset to place you in a computer-generated world that you can explore. Augmented reality, on the other hand, is a bit different. Instead of transporting you to a virtual world, it takes digital images and layers them on the real world around you through the use of either a clear visor or smartphone.

With virtual reality, you could explore an underwater environment. With augmented reality, you could see fish swimming through the world around you.

Understanding Virtual Reality and Augmented Reality

M. PRIYANKA - - 20A31A05E7

Virtual reality

Virtual reality immerses you in a virtual world through the use of a **headset** with some type of screen displaying a virtual environment. These headsets also use a technology called **head tracking**, which allows you to look around the environment by **physically moving your head**. The display will follow whichever direction you move, giving you a 360-degree view of the virtual environment.

Augmented reality

Augmented reality allows you to **see the world around you with digital images layered on top of it**. There are currently a couple of AR headsets available, including the **Microsoft HoloLens** and the **Magic Leap**. However, they are currently more expensive than VR headsets, and are marketed primarily to businesses.

A biochip is a set of diminished microarrays that are placed on a strong substrate that allows many experiments to be executed at the same time to obtain a high throughput in less time. This device contains millions of sensor elements or <u>biosensors</u>. Not like microchips, these are not electronic devices. Each and every biochip can be considered as a microreactor that can detect a particular analyte like an enzyme, protein, DNA, biological molecule or antibody. The main function of this chip is to perform hundreds of biological reactions in a few seconds like decoding genes (a sequence of DNA).
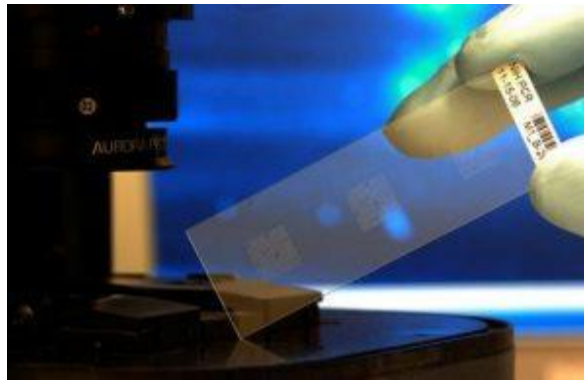
Biochip

Components of BioChips:

The Biochip comprises two components namely the transponder as well as reader.

<u>Transponder :</u>

Transponders are two types' namely active transponder and passive transponder. This is a passive transponder which means that it doesn't contain any of its own energy or battery whereas in passive, it is not active until the operator activates it by giving it a low electrical charge. This transponder

consists of four parts such as antenna coil, computer microchip, glass capsule, and a tuning capacitor.

2) Reader :

The reader comprises of a coil namely "exciter" and it forms an electromagnetic field through radio signals. It offers the required energy (<1/1000 of a watt) to activate the biochip. The reader carries a receiving coil for receiving the ID number or transmitted code sent back from the excited implanted biochip.
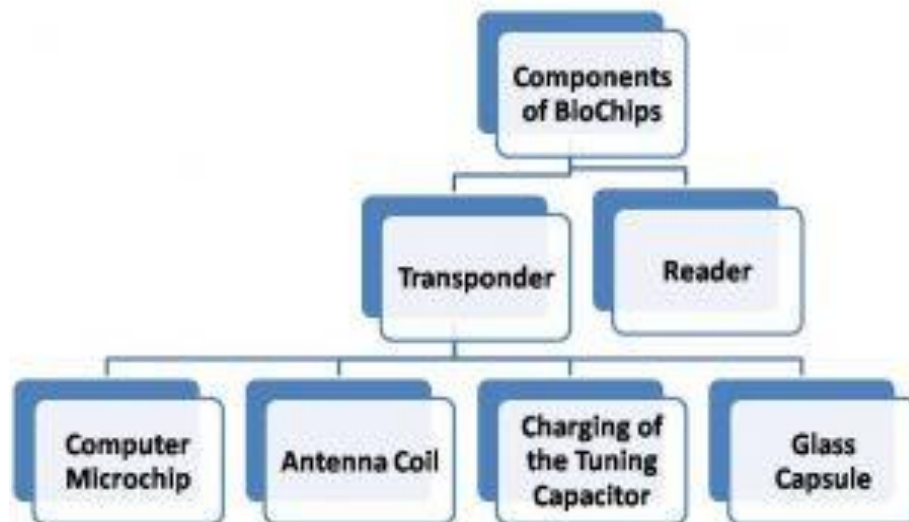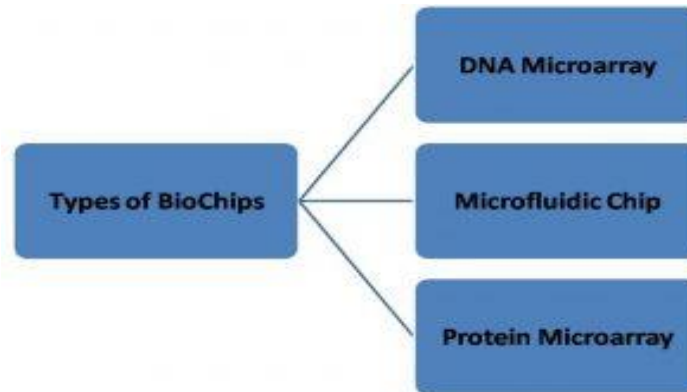

Types of BioChips :

There are three types of Biochips available namely DNA microarray, microfluidic chip, and protein microarray.

1) DNA Microarray:

A DNA microarray or DNA biochip is a set of tiny DNA spots fixed to a strong surface. A researcher utilizes to calculate the expression levels for a large number of genes. Every DNA mark comprises picomoles of particular genes which are termed as probes. These can be a short segment of a genetic material under high rigidity situations.

2) Microfluidic Chip:

Microfluidic biochips or lab-on-a-chip are a choice to usual biochemical laboratories and are transforming several applications like DNA analysis, molecular biology procedures, proteomics which is known as the study of proteins and diagnostic of diseases (clinical pathology).

3) Protein Microarray

A protein microarray or protein chip method is used to follow the actions as well as connections of proteins, and to find out their function on a large scale. The main advantage of protein microarray is that we can track a large number of proteins in parallel. This protein chip comprises of a surface for supporting like microtitre plate or bead, nitrocellulose membrane, the glass slide. These are automated, rapid, economical, very sensitive, consumes less quantity of samples.

Faculty – Publications

Manas Kumar Yogi Asst. Prof., CSE Dept

1. Title
Balancing Data Utility and Data Privacy using Synthetic Data for Cyber Physical Systems

Abstract:
Cyber-Physical Systems are becoming famous and indispensible part of smart environment. As we say so, the need for preserving the trust of users is also multiplying with time. The CPS should be designed in such a way that the private and sensitive data of users in a CPS ecosystem needs to be protected without effecting the utility of data. This issue leads to a trade-off between the two aspects which can be balanced by the introduction of conceptual framework of synthetic data and its properties. The essential features of synthetic data are projected in a concise manner in this paper which will help the engineers working in this research domain to a certain degree of usefulness.

Journal Name: Journal of Computer Technology & Applications, STM Journals
Year: Nov 2021

2. Title: Risk mitigation measures during adoption of ML techniques for additive manufacturing quality control and data security.

Abstract:
Additive manufacturing (AM) has arisen as a promising advanced manufacturing innovation. Notwithstanding, its expansive selection in industry is as yet impeded by high passage boundaries of design for additive manufacturing (DfAM), restricted materials library, different preparing deserts, and conflicting product quality. Lately, machine learning (ML) has acquired expanding consideration in AM because of its unprecedented performance in information undertakings like order, relapse and grouping. This article gives a comprehensive audit on the cutting edge of ML applications in an assortment of AM spaces. In the DfAM, ML can be utilized to yield new elite Meta materials and advanced topological designs. In AM preparing, contemporary ML calculations can assist with upgrading measure parameters, and lead examination of powder spreading and in-measure deformity observing. On the production of AM, ML can help professionals in pre-manufacturing planning, and product quality assessment and control. In addition, there has been an expanding worry about information security in AM as information penetrates could happen with the guide of ML procedures. This paper puts forth the challenges arising when machine learning techniques are used during quality control and data security in the field of additive manufacturing. Then we propose few risk mitigation strategies to counter those challenges. This paper can be a readymade guide for practitioners who are involved in AM process considering ML solutions in the process.

Journal Name International Journal of Circuit, Computing and Networking
Year Dec 2021

3. Title: Impact analysis of using ML techniques on imbalanced datasets for leveraging security of industrial IoT

Abstract
Machine learning calculations have been demonstrated to be reasonable for getting stages for IT frameworks. Nonetheless, because of the basic contrasts between the industrial internet of things (IIoT) and normal IT organizations, a unique exhibition survey should be thought of. The weaknesses and security prerequisites of IIoT frameworks request various contemplations. In this paper, we study the reasons why machine learning should be coordinated into the security components of the IIoT, and where it right now misses the mark in having an agreeable exhibition. The difficulties and certifiable contemplations related with this matter are concentrated in our exploratory plan. In this paper, we advocate a novel mechanism to evaluate the various ML techniques, with the help of an IIoT testbed.

Journal Name International Journal of Circuit, Computing and Networking
Year Dec 2021

4. Title: The Spectrums of AI: Novel Perspectives, Current Trends, Future Directions

Abstract:
Artificial Intelligence is currently the most emerging trend which is believed to have the potential to transmute the future of society in unexpected ways as applying artificial intelligence to any other field can help broaden the field's perspective and make it much more efficient. It is a greatly unexploited stream even now and we are still operating with just a drop in the immense ocean of Artificial intelligence. Assimilating various types of Artificial intelligence and having a clear view of it helps us solve much more perplexing tasks which make our lives simpler. In this paper, we opt to present novel perspectives about the variants of Artificial intelligence concepts that help us to develop applications for use in different areas of modern technology. We are going to discuss the features of various principles utilized in Weak Artificial intelligence, Strong Artificial intelligence, and Artificial Super Intelligence. We also present the history regarding the evolution of Artificial intelligence. This paper will discuss the current trends which are prevailing while using the different types of Artificial intelligence. We conclude the paper by presenting a few research challenges for Artificial intelligence application designers to apply principles of Artificial Intelligence while maintaining a balance between the usages of various spectrums of artificial intelligence in different applications in this technology driven society.

Journal Name 1st International Conference on EMMA 2021
Year Dec 2021

5. Title: Application of Virtual Reality Technologies to Enhance Cultural Perspective in Modern Society

Abstract
Day by day VR is emerging as an educational tool and technology tool for many sectors like education, hospitality, and many more sectors. So there is a need to talk about the cultural differences that come with it. How one can adapt to this Virtual Reality with open mindedness.

One of the cases they can say is Virtual Reality containing the use of audio which may contain the language used by the creator but coming to users there language may be different so this is one example where the language plays a main role to communicate, interact and establish a relationship with people. Hence the creator should keep this in mind and do the needful. Virtual Reality is being used in education especially in training like medicine etc. Virtual Reality helps the students to grasp the subject more effectively, As practical knowledge is more important, So virtual reality is fruitful in education. As now students are learning from VR and if the creators include about their culture then without knowingly there is a chance for the students to misunderstand the culture.

Journal Name THE 3RD INTERNATIONAL CONFERENCE ON VIRTUAL REALITY
Year Dec 2021

6. Title: Novel Perspectives of Security and Privacy Challenges in Virtual Reality Technologies

Abstract:
Virtual Reality era is making users smart day by day due to its limitless potential. Besides providing an immersive experience to the users, it has the robust aspect of providing medical inferences, emotional inferences also. Consequently VR needs huge amount of sensitive user information and direct interaction. In this paper we enumerate the risks involved from the security and privacy perspective while employing VR tools and show how the elements of risk involved in each VR tools can be minimized by modeling them as research challenge and discussing how privacy aware design principles can be incorporated during the manufacturing stage of such VR systems.

Journal Name THE 3RD INTERNATIONAL CONFERENCE ON VIRTUAL REALITY HARRAN UNIVERSITY SANLIURFA TURKEY

Year Dec 2021

7. Title Eliminating Bias in Predictive Policing tools for increasing Degree of Justice

Abstract
This paper acts as a readymade guide to essentials of predictive policing and how the tools deployed in prediction of crimes using AI may suffer from dimensional bias. Our paper is a sincere attempt to bring out the inherent loopholes in the predictive policing technologies and how to overcome them. This paper brings out the principles and practices involved in predictive policing and how the states in India are using AI to strength their police departments so as to reduce crime rate in their area of control. The paper also explores the common pitfalls while employing the predictive policing techniques and some of the existing myths related to predictive policing. We also include few case studies in the results section which gives the reader a view of the current state-of-art in predictive policing.

Journal Name The Journal of Applied Computer Science & Artificial Intelligence
Year Dec 2021

8. Title IMPACT OF CLOUD COMPUTING PRINCIPLES IN EDUCATIONAL SYSTEM: TRENDS, PRACTICES AND FUTURE DIRECTIONS

Abstract:
These days the Education system has advanced greatly. People are wishing to learn new technologies. Those small class rooms with limited technical resources, inadequate teachers can't meet the student requirements anymore. In situations like that Cloud Computing has taken the Education System to another level. Through the technologies in Cloud Computing like Virtualization, SaaS students can learn technologies and explore themselves.

9. Title Proof-of-Minimum Privacy Leak Consensus Strategy in Blockchain

Abstract:
In this study, we propose a novel consensus algorithm to preserve the security and privacy of a transaction. We propose a Proof-of-Minimum Privacy Leak consensus strategy. This means that the competing nodes which participate in the competition to mine the next block should give a proof of minimum privacy leak during its transaction. Only this proof will give highest votes to that node, and it will be elected as the leader. The minimum privacy leak of a node participating in a Blockchain depends on various factors intrinsic to the Blockchain application. For example, if the application is related to healthcare, it will be related to the sensitive data of a patient, if it is a banking application, it will be related to monetary aspects of the account holder, etc. For our study, we apply the proposed approach to a smart voting system where Blockchain is deployed. Here, the participants' details during voting are private data and there are provisions to reduce the voter privacy so that the participants of the smart voting system gain trust in the system rather than doubting that their privacy will be preserved or not. Our proposed mechanism performs better than recent popular consensus algorithms as shown in the experimental result. The results are displayed in terms of improved scalability, reliability and degree of increased trust.

10. Title: Applying XAI for Smart city Security and Privacy: Novel Perspectives

Abstract:

Artificial Intelligence (AI) has altered the shape of our minds as well as the mechanism by which we perceive and contemplate our surroundings. Since its inception, AI has undergone substantial changes and its evolution has been ground-breaking. Despite AI's rapid growth of operations in smart cities to automate repetitive tasks such as surveillance, waste disposal management, and other data-driven applications, we still lack frameworks with explicable results. This is where explainable AI (XAI) comes into play. People have complete confidence in AI only when the algorithms used in the process and its operations are clear and

comprehensible. Unfortunately, many of the existing AI systems employed in smart cities are sophisticated black boxes that produce outcomes when the data is fed into them. This paper outlines the security and confidentiality aspects of using XAI in smart cities to ensure it is safe and reliable. By peering inside the autonomous systems employed in smart cities, we could comprehend the functioning and the decisions made so that the overall working gains explainability, transparency, and accountability. Most importantly, we could effortlessly determine if there was a flaw or if something could go wrong, hence providing more security and effectiveness to the systems.

Journal Name: AICTE Sponsored International Conference On Role of AI and Sustainable Engineering In Driving Smart Cities, 2022

Year: April 2022

11. Title: Sustainable Smart city with Green IoV: Challenges, Opportunities, Future directions

Abstract:
Web of Vehicles (IoV) has been perceived as a focal advancement for cultivating the Intelligent Transportation Systems in smart metropolitan regions. along the improvement of the sixth time (6G) correspondences developments, tremendous association establishments will be thickly sent and the amount of association centre points will increase significantly, provoking unquestionably high energy usage.. There has been an upsurge important to foster the green IoV towards support capable vehicular correspondence and systems administration in the 6G period. At any situation, as a unique portable specially appointed network, the energy cost in an IoV framework includes the correspondence and calculation energy notwithstanding the fuel utilisation and the power cost of moving vehicles. In addition, the energy reaping innovation, which is probably going to be embraced generally in 6G frameworks, will confuse the advancement of energy proficiency in the whole framework. Current investigations center just around a piece of the energy issues in IoV frameworks without an extensive conversation of the best in class energy-productive methodologies and the impact of the advancement of 6G organisations on green IoV. In this paper, we present the primary contemplations for green IoV from five distinct situations, including the correspondence, calculation, traffic charged vehicles, and energy gathering the executives.

Journal Name: AICTE Sponsored International Conference On Role of AI and Sustainable Engineering In Driving Smart Cities
Year: April 2022

12. Title: Using AI for Urban Planning in Smart Cities: Current Trends, Future Directions

Abstract:
The utilization of man-made consciousness (AI) in brilliant urban communities, its impact on administration, direction, inventive discipline, and prospects of upheaval have been a subject of conversation in discussion and practice on-going years. Man-made reasoning and the Internet of Things can decidedly impact savvy navigation. As of now, AI is turning into a requirement for day-to-day existence and hierarchical systems as innovation has taken incredible makes a plunge

engaging AI progression. Simulated intelligence adds to brilliant urban communities' decision-production since shrewd navigation uses a deliberate and coordinated way to deal with gather information and applies objective dynamic frameworks as opposed to utilizing hit and miss, intuition, or summing up from in general insight. "Shrewd urban areas" is a multi-faceted idea and has been characterized distinctively by various researchers. In any case, the necessary essential to being a brilliant city is to achieve reasonable social, natural, and monetary turn of events and work on the expectations for everyday comforts of society by using Information and Communication Technology (ICT) and AI. Metropolitan preparation, to put it plainly, manages taking care of the issues of the cutting edge society. The issues are integral to the developing populace in the present society. Information has become omnipresent with such shrewd gadgets that are associated with the web. Simulated intelligence and IoT have promising impacts metropolitan life. Computerized reasoning is regularly viewed as the fourth modern insurgency due to its exceptional potential to make a huge difference. As AI advances to work on step by step, it has favored people including savvy medical care to got shrewd urban areas. All that has been changed by AI and IoT in brilliant urban communities. In this paper, the different use instances of AI and IoT for metropolitan preparation to assemble shrewd and manageable urban communities are examined.

Journal Name: AICTE Sponsored International Conference On Role of AI and Sustainable Engineering In Driving Smart Cities

Year: April 2022

13. Title: Green AI for Smart Cities Sustainability: Novel Perspectives

Abstract
Smart Cities yields many advantages for society, including upgraded open doors for schooling, further developed work possibilities, better admittance to healthcare and cleaner water. However it is additionally connected with tremendous cultural and ecological difficulties. Wasteful preparation and the executives rehearses lead to impractical settlements that don't empower individuals to progress actually, socially or financially. Smart and imaginative advances, including artificial intelligence, are upsetting the manner in which cities address the difficulties related with smart development. This paper rehashes few novel perspectives towards the application of unique AI paradigms for sustainability of smart cities. The current trends along with concerns are also presented. The paper concludes by paving a way for the researchers to think in a direction imperative for using AI for green IT for a better future.

Journal Name
Year: April 2022

14. Title: Privacy Aspects in Smart Cities: Concerns and Challenges

Abstract
We accept that genuine keen urban communities rely on their residents, and they should ensure their protection to make this test a genuine progress. In this paper we have introduced the concerns surrounding the smart city privacy. Our discussion concentrates on: personality protection, inquiry security, area security, impression security, and proprietor protection. We

have also presented a discussion regarding the design challenges related to privacy containment in a smart city. The paper sheds light on few elements of research to be explored in future to counter the privacy concerns in a smart city.

Journal Name AICTE Sponsored International Conference On Role of AI and Sustainable Engineering In Driving Smart Cities

Year: April 2022

Book Chapters

1. Title: Research Challenges in Cryptocurrency Transaction Networks

Abstract:

Book Title: Cryptocurrency: A Bright Future or a Fad

Year: November 2021

2. Title: NOVEL METHOD FOR PRIVATE DATA RELEASE IN CYBER-PHYSICAL SYSTEMS

Abstract:

Book Title: Advances in Computer Science and Information Technology

Year: Feb 2022

3. Title: Beyond the Pandemic: Survival of the Human Race and Challenges

Abstract: The COVID-19 pandemic is changing our lives in an unanticipated manner. Various sectors like healthcare, education, business, entertainment, tourism, etc. are affected. Many disruptive technologies like AI, blockchain, 3D printing, robotics, genomics, distributed power systems, etc. made a huge impact during the pandemic. Wearing masks, frequent handwashing, maintaining social distance, etc. are the new normal. The Sustainable Development Goals (SDG) that were targeted for 2030 are moving against the goals. Due to COVID, online shopping increased, reported crime rates reduced, cybercrimes increased, school dropouts increased, financial instability increased, etc. Many researchers are affirming that only after attaining herd immunity, the corona virus will vanish. But another question to be answered is whether it is possible to achieve herd immunity with so many variants of the virus spreading all over the world. This chapter discusses various disruptive technologies, how humans are struggling to live along with the virus, and a future look on how the world will be after the pandemic.

Book Title: Handbook of Research on Lifestyle Sustainability and Management Solutions Using AI, Big Data Analytics, and Visualization, IGI Global Publications

Year: April 2022

4. Title: Privacy Preserving Mechanism by Application of Constrained Nonlinear Optimization Methods in Cyber-Physical System

Abstract: In the future, cyber-physical systems (CPSs) will be used in most of real time scenarios. To make the world smart, the application of such systems is inevitable. However, with increasing use of such systems, privacy has also to be increased. If privacy aspect is compromised, then the users will not be easily habituated to such systems. CPSs involve multiple heterogeneous sensor data sources, so introducing considerable level of privacy remains an ever growing challenge for the system designers. In this chapter, we are going to present the applicability of exact penalty function and its benefits to increase the privacy level of CPSs. We will compare this with other techniques of privacy preservation in CPSs and throw light on the future enhancements of our proposed privacy framework.

Book Title: Cyber Security and Network Security, Wiley Publications

Year: March 2022

5. Title: Application of Exact Barrier-Penalty Function for Developing Privacy Mechanisms in Cyber-Physical Systems

Abstract: In this chapter, the applicability of the exact barrier-penalty function and its benefits to increase the privacy level of cyber-physical systems is presented. The chapter starts with the introduction of privacy preservation in cyber-physical systems and a discussion of related work carried out by researchers in this domain is also presented. The privacy problem is formulated as a constrained nonlinear function in dynamic systems such as a cyber-physical system and then the exact barrier-penalty function is proposed as a possible solution to limit the privacy budget so as to release a minimum amount of sensitive user data. The experimental results show it is an improvement over the other popular methods existing in the field of cyber-physical systems. The results showing the improvement in data utility and data sensitivity for selected values of the privacy budget indicate that this method will provide a robust solution for the privacy preservation mechanisms for systems operating in the cyber-physical ecosystem.

Book Title: Security Analytics, Chapman and Hall/CRC

Year: April 2022

AI AND DEEP LEARNING RESEARCH GROUP

Pragati Engineering College (Autonomous) is now Zonal Lead for leadingindia.ai – A national wide AI Skilling and Research Initiative

Objective

Objective of the leadingindia.ai initiative is making Deep Learning and AI skills mainstream in India to fulfill trilateral needs of entrepreneurship, Industry academia partnership and application-inspired Engineering Research

Head of the Research Group: **Dr. S Rao Chintalapudi, Associate Professor, Department of CSE**

Research Group Members

- Prof. S V Ramana Murthy Professor,Department of CSE

- Dr. M. Radhika Mani Head &Professor,Department of CSE

- Mrs. D. Sirisha Head & Associate Professor,Department of IT

- Mr. M V Rajesh Associate Professor,Department of CSE

- Mrs. Y. Jnapika Assistant Professor,Department of CSE

Name of the AI Students Club: Future Now

Name of the Student Ambassador: Ms. Hyndhavi Kona

AI Skilling Target (By the end of 31st March 2020) : 2000

AI Skilling Achieved (By the end of 31st August 2019) : 1013

For more details follow this link: https://www.leadingindia.ai/zonalleaddetails/71

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Linkedin Link: https://www.linkedin.com/company/pragati-ai-and-deep-learning-research group/

Twitter Link: https://twitter.com/AiPragati

Instagram Link: https://www.instagram.com/pragati_ai_dl_researchgroup/

Special Web Page to be added on your Institution Web site (May be linked to leadingindia.ai)

Give the link here : https://pragati.ac.in/research-and-development-cell/ai-and-deep-learning research-

group/