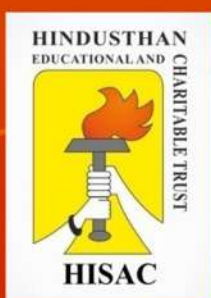


PROCEEDINGS OF THE NATIONAL SYMPOSIUM ON RECENT TRENDS IN COMPUTING



**ORGANIZED BY
DEPARTMENT OF COMPUTER SCIENCE**

**HINDUSTHAN
COLLEGE OF SCIENCE AND COMMERCE**
(Affiliated to Bharathiar University, Coimbatore)
INGUR, PERUNDURAI, ERODE - 638052.



NATIONAL TECHNICAL SYMPOSIUM

TECH WALA 2K24

23 AUGUST 2024

Organized by

Department of Computer Science

HINDUSTHAN

COLLEGE OF SCIENCE AND COMMERCE

(Affiliated to Bharathiar University, Coimbatore)

Ingur, Perundurai,

ERODE – 638 052.

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Acknowledgement

The Organizing committee thanks the management of Hindusthan College of Science and Commerce for their encouragement to organize the A National Technical Symposium on “Recent Trends in Computing” on 23rd August 2024.

We express our heartfelt thanks to all the leading speakers for expelling the current trends in computing on the fresh minds.

We wish to thank the contributors to the symposium for providing their articles in a timely manner and when required, for responding quickly to our comments. In order to produce this proceeding of the conference, we were bound by tight deadlines. We have tried to apply, wherever possible, a minimum a set of standards to all articles, with regard to the quality of English and the technical merit of the research. We feel that the priority to publish the article on its own merit and to make the useful data and information widely available.

We are highly indebted to our secretary, Executive Secretary, CEO, Principal and Faculty members for their constant help for the successful conduct of the Symposium.

We show our gratitude to the press partners, media partners for giving us with the wide range of promotion among the public and industries. Also, we extend our cavernous appreciation to the publisher who formulates our ideas into a recognized form of manuscript with ISBN number.

We also thank the students of the Department of Computer Science for their cooperation and involvement for conducting the symposium.

Our thanks go to all those who were behind the screen and assisting us in all our actions during the symposium.

From Secretary's Desk

I am glad that Department of Computer Science organize National Technical Symposium "Recent Trends in Computing". I feel immense pleasure in conveying my warm greetings and welcome the guests, delegates and participants of this Symposium.

I hope that the special lectures and papers presented by delegates in the symposium will enhance the spirit of the participants to update the knowledge in the current trends in Computer Science. I whole heartedly applaud the organizing committee for their industrious work in scheduling this Symposium.

I wish the conference a grand success.

Dr. K. Priya
Executive Secretary
Hindusthan Educational Institutions

From CEO's Desk

It gives me immense pleasure to know that the Department of Computer Science at Hindusthan College of Science and Commerce, Erode, is organizing a National Technical Symposium titled '**Recent Trends in Computing**'. Education is not just about imparting or acquiring knowledge in a particular subject, it should also train students in logical thinking and help them arrive at the right conclusion. Besides imparting knowledge, education should encourage students to think critically.

I understand that the aim of this symposium is to provide an interdisciplinary forum for exploring, discussing, and deliberating on diverse technical developments and their applications in advanced fields of study. I sincerely hope that this symposium will go a long way in igniting the minds of students and initiating the process of scientific thinking in their respective fields of science and technology.

I congratulate the organizers of the symposium and wish them all the best in their endeavors.

Dr. K. Karunakaran
Chief Executive Officer
Hindusthan Educational Institutions

From Principal's Desk

I am extremely happy that the Department of Computer Science is hosting A National Technical Symposium on “Recent Trends in Computing”. The focus of the symposium covers different aspects of information technology. This symposium will provide an opportunity for the students to present their work and exchange ideas with a view to formulate future priorities for research in the field of Computer Science.

I also understand that the symposium is bringing out its proceedings by publishing an ISBN rated publication. This will go a long way in highlighting the topics of discussion in the symposium and add to the existing literature in the IT field.

My best wishes for the symposium and I hope it is eventful, fruitful and successful one.

Dr.N.Raman
Principal
Hindusthan College of Science and Commerce

About the Symposium

We are pleased to inform that A National Technical Symposium TECH WALA-2k24 is being hosted by the Department of Computer Science Cyber Tech Association. By sharing their technical scrutiny with aspiring methodical minds, Mr. Santosh Anand, BE, MTech, [PhD], Asst. Professor, Department of Information Science & Engineering, Dayananda Sagar College of Engineering, Kumara Swamy Layout, Bengaluru, would bring glory to the momentous occasion.

The aspiration of the symposium is deepen the intellectual views towards the research in the field of computer science. The symposium is organized with a focus on the roles of computer science in the real world, particularly in current trends in computing. A new approach to our Symposium involves offering students a choice between attending sessions with speaker and technical discussions across various domains. This format allows students to select the topics they are most interested in learning about. The Symposium serves as a valuable opportunity for participants to learn from industry professionals and engage in stimulating discussions. Furthermore, the event serves as a platform for brainstorming and generating ideas for the future. By facilitating interactions with professionals, the Symposium inspires new aspirations and encourages the development of innovative ideas related to the analyzed research.

Over 300 Students from various colleges have attended the symposium. The symposium is not only a chance to learn from the professionals and it is a brain storm for the future. The Symposium gives an opportunity for all participants to have new aspirant and ideas towards the analyzed research.

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ARTIFICIAL INTELLIGENCE

K. Siva, B.C.A

K.S.Rangasamy College of Arts and Science (Autonomous)

Abstract- Artificial Intelligence (AI) refers to the capability of a computer program to acquire knowledge or execute typical actions that are commonly associated with human beings. The design to scrutinize voluminous datasets, make sense out of them and provide answers with little human intervention. AI systems go through users input, and interprets their intention in order to take action. Artificial Intelligence (AI) is the ability of a computer program to learn about or perform usual activities associated with human beings. The AI design is such that can scrutinize voluminous datasets, make sense out of them and offer answers without relying heavily on humans. AI systems examine users' inputs, and interpret their purpose in order to act.

NETWORK SECURITY AND CRYPTOGRAPHY

Mrs.R. Revathi, Assistant Professor

Ms.A.Shurthika, II- BSc DS

Ms.S.Varnikha Sree II- BSc DS

Department of Computer Science/ Data Science

K.S.Rangasamy College of Arts and Science (Autonomous)

Abstract- The World Wide Web, e-commerce platforms, and social networks have led to massive data generation for enterprises globally. Secure data transmission via the internet has become a top priority, making information security a critical issue. As society moves towards the digital era, network security is becoming increasingly important. As more people connect to the internet, cyber-attacks become more prevalent. Protecting computer and network security is crucial tackling significant concerns. Malicious nodes in the network can exploit other node's resources while safeguarding their own. This is a substantial difficulty. This paper provides an overview of network security and discusses ways for improving it, with a focus on cryptography.

ARTIFICIAL INTELLIGENCE

**Mr. Aravind, Mr. VishnupriyanI
B.Sc CS (AI&DS)**

Bharathidasan College of Arts and Science, Erode

Abstract- Artificial intelligence (AI) is a wide-ranging branch of computer science that aims to build machines capable of performing tasks that typically require human intelligence. While AI is an interdisciplinary science with multiple approaches, advancements in machine learning and deep learning, in particular, are creating a paradigm shift in virtually every industry. Artificial intelligence allows machines to match, or even improve upon, the capabilities of the human mind. From the development of self-driving cars to the proliferation of generative AI tools, AI is increasingly becoming part of everyday life.

TURNING TRASH INTO TRESURE BY RECYCLING

**Mrs.M.Sri.Soundharyaa
Assistant Professor**

**Department of Computer Science with Cyber Security
Sri Ramakrishna College of Arts and Science**

Abstract- Electronic waste, or e-waste, refers to old or discarded electronic devices that are no longer useful or have reached the end of their functional lifespan. E-Wastes are spoiled, Outdated, Non repairable electric and electronic appliances like computer equipment, TV's, cell phones, batteries, stereos, Refrigerators etc., are popular examples of item that contain harmful toxic components that need to be recycle properly. E-waste management faces challenges from various angles, including management, environmental, labor, and healthy concerns. The fast pace of technological advancements, frequent updates in innovation, and the quick obsolescence of electronic devices have contributed to one of the fastest-growing waste problems globally, consisting of outdated electrical and electronic products. This review shows how e-wastes can be recycled and its lifecycle process with its advancements and rules to make a "Trash as a Treasure".

VIRTUAL SURGERY

Sreeja K J

**Department of Computer Science
VET Institute of Arts and Science, Erode**

Abstract- Virtual surgery, also known as surgical simulation or virtual reality surgery, is a technology that allows surgeons to practice procedures in a virtual environment. This technology uses computer-based programs and simulated models to create an interactive environment that closely mimics real-life surgical procedures. Virtual surgery has a number of advantages, such as allowing surgeons to practice complex surgeries and techniques in a safe, controlled environment before performing them on patients. It also provides a way for surgical teams to collaborate and communicate more effectively, and it can help to reduce the risk of surgical errors and complications.

BRAIN-COMPUTER INTERFACE (BCI) WITH AI

Sowmya. S, Deebak Ranganathan.

Computer science (UG)

Kongu Arts and Science College, Erode

Abstract - Brain-computer interfaces (BCIs) have shown great prospects as real-time bidirectional links between living brains and actuators. Artificial intelligence (AI), which can advance the analysis and decoding of neural activity, has turbocharged the field of BCIs. Over the past decade, a wide range of BCI applications with AI assistance have emerged. These “smart” BCIs including motor and sensory BCIs have shown notable clinical success, improved the quality of paralyzed patients’ lives, expanded the athletic ability of common people and accelerated the evolution of robots and neurophysiology discoveries. However, despite technological improvements, challenges remain with regard to the long training periods, real-time feedback, and monitoring of BCI. This paper reviews the current state of AI as applied to BCIs and describe advances in BCI applications, their challenges and where they could be headed in the future.

AI BASED CCTV CAMERA FOR SURVEILLANCE

Ahalya K, Akash K

Sri Krishna Arts and Science College, Coimbatore

Abstract - This project proposes the development of an innovative AI-based CCTV camera system aimed at revolutionizing surveillance capabilities. Integrating advanced artificial intelligence algorithms with high-resolution cameras, the system enhances real-time monitoring, detection, and analysis of security threats. The AI algorithms enable intelligent object recognition, anomaly detection, and behavior analysis, thereby significantly improving the accuracy of identifying potential risks. The proposed CCTV system offers a proactive approach to security, allowing for swift response to suspicious activities and minimizing false alarms. The research explores the synergy between cutting-edge AI technologies and surveillance, providing a robust solution for efficient and effective monitoring in various environments.

BIG DATA ANALYTICS

Dhanush.V & Manjurekha.C

Department of Computer Science (UG),

Kongu Arts and Science College, Erode.

Abstract-We live in on-demand world with vast majority of data. People and devices are constantly generating data, while streaming a video, active in social media, playing games, search any location using GPS. In this information era, enormous amounts of data have become available on hand to decision makers. This data increase day by day from many resources, various types of techniques and technologies. The data is categories as “Big Data”. Big data refers to datasets that are not only big, but also high in variety and velocity, which makes them difficult to handle using traditional tools and techniques. It is structured and unstructured data and heterogeneous in nature Due to the rapid growth of such data, solutions need to be studied and provided in order to handle and extract value and knowledge from these datasets. Furthermore, decision makers need to be able to gain valuable insights from such varied and rapidly changing data, ranging from daily transactions to can be provided using big data analytics, which is the application of advanced analytics techniques on big data. This paper aims to analyze some of the different methods that is fault detection management and tools which can be get by big data, as well as the opportunities provided by the application of big data analytics in various decision domains.

WIRELESS SENSOR NETWORKS

Kaviya Thangaraj & Prathiksha Gopalakrishnan

IBCA

Vellalar College For Women, Thindal, Erode.

Abstract-Your cell-phone has 10 sensors, and your car has 400. But your body has none - that's going to change. Wireless Sensor Networks (WSNs) have revolutionized the way we monitor and interact with our environment. Comprising tiny sensors that communicate wirelessly, WSNs enable real-time data collection, processing, and dissemination. This paper presents a comprehensive overview of WSN architectures, highlighting their components, protocols, and applications. We discuss the challenges faced by WSNs, including energy efficiency, scalability, security, and fault tolerance. Furthermore, we explore emerging trends in WSNs, such as IoT integration, AI-powered WSNs, and edge computing. Our analysis reveals the potential of WSNs in transforming industries like healthcare, industrial automation, and environmental monitoring. We also identify future research directions, including the development of energy-harvesting sensors, secure communication protocols, and adaptive network architectures. By addressing these challenges and leveraging emerging trends, WSNs can unlock new possibilities for smart and connected systems. This paper aims to provide a thorough understanding of WSNs and inspire innovative solutions for real-world applications.

ARTIFICIAL INTELLIGENCE

D.Thirumalai

T.Sangamitha

Department of Computer Science (UG)

Kongu Arts and Science College (Autonomous)

Abstract- Artificial Intelligence is the Science and Engineering domain concerned with the theory and practice of developing system that exhibit the characteristics we associate with intelligence in human behavior. Starting with a brief history of artificial intelligence, this paper presents a general overview of this broad interdisciplinary field organized around the main modules of the national architecture of an intelligent agent.

AUTOMATED AGRI-FIELD MANAGEMENT SYSTEM

K.Akilesh V.E.Arunprasaath
Kongu Arts and Science College (Autonomous)

Abstract- The term IoT stands for the internet of things and can be defined as the interconnection between the individually identifiable embedded computing apparatus in the accessible internet infrastructure. The 'IoT' connects various devices and transportation with the help of the internet as well as electronic sensors. IoT sensors like DHT11 temperature and humidity sensors, and soil moisture sensors are very useful to monitor the temperature.

THE ROLE OF AI IN CYBERSECURITY: ENHANCING THREAT DETECTION AND RESPONSE

T. Kavipriya
Assistant Professor
Department of Computer Science with Cyber Security
Sri Ramakrishna College of Arts and Science, Coimbatore

Prof. N.Kumar
Assistant Professor in Computer Science
Dr.N.G.P. Arts and Science College, Coimbatore.

Abstract-The digital landscape is increasingly vulnerable to cyber threats, which have become more sophisticated and frequent in recent years. Traditional cyber security measures often prove inadequate in combating these advanced threats. This paper explores the pivotal role of Artificial Intelligence (AI) in enhancing threat detection and response mechanisms in cyber security. By leveraging various AI techniques, organizations can improve their security posture, reduce response times, and better protect sensitive data. This research discusses the fundamental concepts, applications, challenges, and future directions of AI in the cyber security domain.

USE OF WIRELESS SENSOR NETWORKS IN SMART HOMES

Dr. Ramesh. J

Head of the Dept. of Computer Science Data Science

Vishalini.P , Janani.K. S

II B.Sc (DS),KSRCAS, Tiruchengode.

Abstract- Using wireless sensor networks, home automation systems monitor and control many factors, including temperature, voltage, and current. Cutting down on a smart home's needless energy use is the major goal. It contributes to the control network's increased performance. The relevant parameters are monitored, controlled, and the related graphical representation is generated using Visual Basic. The controller, system server, switches, wireless transceiver, sensors, and other key components make up the smart home system. Up to 100 meters can be covered by the wireless sensor for device control and monitoring. In this study, the DALI is fed input in the form of BCD code in order to monitor and control the device's performance.

NETWORK SECURITY AND CRYPTOGRAPHY

Mrs.Revathi.R,

Assistant Professor, Dept. of Computer Science – Data Science

Shurthika. A , Varnikha Sree.S

II B.Sc (DS), Dept. of Computer Science – Data Science

KSRCAS, Tiruchengode.

Abstract-The World Wide Web, e-commerce platforms, and social networks have led to massive data generation for enterprises globally. Secure data transmission via the internet has become a top priority, making information security a critical issue. As society moves towards the digital era, network security is becoming increasingly important. As more people connect to the internet, cyberattacks become more prevalent. Protecting computer and network security is crucial for tackling significant concerns. Malicious nodes in the network can exploit other nodes' resources while safeguarding their own. This is a substantial difficulty. This paper provides an overview of network security and discusses ways for improving it, with a focus on cryptography.

DATA SCIENCE AND ANALYTICS

R.Shamiga Begum, K.Sureka

**II-B.Sc Data Science Department of Data Science
Excel College for Commerce and Science**

Abstract-Data science is an interdisciplinary field that combines elements of Computer science, Statistics, Mathematics, and Domain-specific Knowledge to extract insights and Knowledge from data. Data science combines math and statistics, specialized programming, advanced analytics, artificial intelligence (AI) and machine learning with specific subject matter expertise to uncover actionable insights hidden in an organization's data. These decision making and strategic planning. These techniques are not exhaustive, but they cover a wide range of data science applications. The choice of technique depends on the problem, data type, and desired outcomes. These applications demonstrate the versatility and impact of data science in various domains, driving innovation, efficiency, and informed decision-making.

ARTIFICIAL INTELLIGENCE

Arul Mozhi V & Mounika Dharani PV

Computer Science (UG)

Kongu Arts and Science College (Autonomous), Erode

Abstract-Artificial Intelligence is the Science and Engineering domain concerned with the theory and practice of developing systems that exhibit the Characteristics we associate with intelligence in human behavior. Starting with a brief history of artificial intelligence, this paper presents a general overview of this broad interdisciplinary field, organized around the main modules of the notional architecture of an intelligent agent.

INTERNET OF THINGS (IoT) HEALTHCARE

Kanimozhi.M, Joshika.V

Department of Computer Science with Cyber Security

Vellalar College for Women (Autonomous), Erode.

Abstract-The Internet of Things (IoT) is revolutionizing the healthcare industry by enabling the creation of interconnected devices that monitor, diagnose, and enhance patient care. IoT in healthcare facilitates real-time data collection, remote patient monitoring, and personalized treatment through advanced wearable devices and intelligent medical equipment. The integration of IoT in healthcare not only improves the quality of life for patients but also optimizes healthcare operations by enabling efficient communication between patients and doctors. This paper explores the significant impact of IoT on healthcare, highlighting its benefits, challenges, and future directions. With the global market for IoT in healthcare projected to grow significantly, the technology promises to reshape healthcare into a more connected, patient-centric, and efficient system. Case studies, such as Cleveland Clinic's IoT-driven asset tracking and Dexcom G6's continuous glucose monitoring, demonstrate the practical applications and advantages of IoT in improving patient outcomes and operational efficiency it more accessible, efficient, and personalized.

BIOCHIPS

M. Menaga & R. SugunadeviII B.Sc (CS)

Department of Computer Science

Vellalar College for Women (Autonomous), Erode.

Abstract-A biochip is a collection of miniaturized test sites. Typically, a biochip's surface area is no longer than a fingernail. Like a computer chip that can perform millions of mathematical operation in one second, a biochip can perform thousands of biological operations, such as decoding genes, in a few seconds. The biochip implants system consists of two components: a transponder and a reader or scanner. The transponder is the actual biochip implant. The biochip system is radio frequency identification (RFID) system, using low-frequency radio signals to communicate between the biochip and reader. The reading range or activation range, between reader and biochip is small, normally between 2 and 12 inches.

GEN AI -VIDEO SUMMARIZER

C.B. Gowtham, P. Karshini

II BSc. (IT) -A

Hindusthan College of Arts and Science, Coimbatore

Abstract-The development of software that converts video footage into text greatly improved students' study habits' effectiveness. This technology produces written transcripts from lectures, tutorials, and other instructional videos so that students may rapidly access, read, or study the content without having to watch long recordings again. This feature not only makes studying more efficient, but it also helps students concentrate on important ideas and details, making the most of their study time and enhancing recall. Moreover, the capability to transform videos into text gives students a flexible tool that is useful in different ways. They can quickly annotate the text, mark key passages, and write summaries, all of which help the reader gain a deeper comprehension of the material. It Employs the Natural Language Computing algorithm, which utilizes advanced algorithms to analyses the audio tracks within video files, effectively capturing spoken dialogue and other relevant sounds. This concept can not only be applied to You Tube videos, but any video a user needs to understand the core concept.

ROBOTICS AND AUTONOMOUS SYSTEMS: REVOLUTIONIZING INDUSTRIES AND EVERYDAY LIFE

Aakash. P & Pranav Babu. BII

BSc AIML

Department of Software Systems

Sri Krishna Arts and Science College, Coimbatore

Abstract-Robotics and autonomous systems are revolutionizing various industries, including manufacturing, healthcare, and transportation. They optimize production processes, enhance surgical precision, and redefine mobility through autonomous vehicles. Autonomous systems assist in surgeries, monitor crops, and streamline logistics operations. Real-life examples like Tesla's Autopilot, the Da Vinci Surgical System, and Amazon's robotics in logistics demonstrate their impact. DJI drones are versatile in aerial photography and surveillance. These technologies are driving innovation across domains, but addressing challenges and fostering collaboration is crucial for harnessing their full potential for a better future.

REVOLUTIONIZING AGRICULTURE WITH ROBOTICS TRANSFORMING FARMING PRACTICES FOR THE FUTURE

**Dinesh V , Kirubanithi R(AIDS & IT)
VET Institute of Arts & Science, Erode.**

*Abstract-*Agricultural robotics is transforming modern farming by enhancing efficiency, reducing reliance on manual labor, and enabling precise application of inputs. This technological revolution, often referred to as Agriculture 4.0, leverages automation and precision agriculture to optimize productivity and sustainability. Key advancements include autonomous tractors, robotic harvesters, and drones for monitoring crop health. These innovations address challenges such as labor shortages and the need for sustainable farming practices, ultimately paving the way for a more productive and environmentally responsible agricultural Future.

CLOUD GAMING

**G Krishnapraganesh
Kamalnath A
B.Sc.CS (AIDS)**

VET Institute of Arts & Science, Erode.

*Abstract-*Cloud gaming is a technology that allows users to play video games on various devices without needing high-end hardware. Instead of running the game on the user's device, the game is processed on powerful remote servers, and the gameplay is streamed to the user in real-time. This allows for high-quality gaming Experiences on devices like smartphones, tablets, and low-spec computers, as long as there's a stable and fast internet connection. Cloud gaming is transforming the gaming industry by making games more accessible and reducing the need for expensive gaming consoles or PC.

YOUR CAR TRANSFORMING AUTOMOBILE INDUSTRY FOR THE FUTURE

Aathi Hari Hara D

Saravana Kumar E

(B.Sc AIDS)

VET Institute of Arts & Science, Erode.

*Abstract-*Your car the main aspect of this work is to prevent loss of human life and safe driving. This work "your car" is based on three different types of AI tech which is specialized in its field. These three AI techs are controlled by main system ("your car") and it also used to control and maintain the above functions.

REVIEW OF SENTIMENT ANALYSIS: A MACHINE LEARNING APPROACH TO ANALYZING HUMAN EMOTIONS AND OPINIONS

Mr.R.Janarthanan Mr.V.Gugan

III B.Sc. Computer Science

Mrs.N.Sudha

Assitant ProfessorDepartment of Computer Science

Excel College for Commerce and Science, Namakkal

*Abstract-*In recent years, the vast amount of textual data available on the web has been exponentially increasing. Online shopping sites, in particular, provide customers with the opportunity to share their opinions and reviews about products. Analyzing these large volumes of text data is crucial for enhancing sales and improving customer satisfaction. However, manually analyzing such a massive amount of reviews is impractical. This is where sentiment analysis and opinion mining come into play. Sentiment analysis is a machine learning approach that aims to analyze and classify human sentiments, emotions, and opinions expressed in text or speech data. The primary challenge lies in identifying the emotions expressed in these texts, which can be complex and nuanced. The literature survey presented here aims to delve deeper into the sentiment analysis problem and familiarize readers with the existing works on the subject.

WIRELESS SENSOR IN INTERNET OF THINGS (IOT)-AN OVERVIEW

Kamaraj .S & Kamalakanan .G

II M.Sc Computer Science

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Abstract- This document discusses wireless sensor networks and their role in the Internet of Things. It defines sensor networks and their architecture, including sensor nodes that communicate wirelessly to a base station. It outlines challenges for sensor networks like fault tolerance, scalability, and quality of service. It also describes how sensor networks can be integrated into the Internet of Things through different approaches, with the first using a single gateway and later approaches using hybrid networks and access points. Applications of sensor networks in IoT include wearable devices collecting biometric data and communicating it to servers. Wireless Sensor Network (WSN) is basically a wireless network in which sensor nodes are distributed in any environment condition, to collect the data or information such as temperature, pressure, wind, sea level etc. and accordingly data or information will be passed to the main location. An infrastructure wireless network that is deployed in a large number of wireless sensors in an ad-hoc manner that is used to monitor the system, physical, or environmental conditions.

CLOUD COMPUTING-AN OVERVIEW

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Abstract-Cloud computing is an Internet based resource sharing which trigger broad network access. This cloud computing technology is a new technology which delivers a new model for information and services by means of an existing grid computing technology. Further, this new technology uses Internet infrastructure to communicate between the client and the server-side service applications. Apart from this, cloud computing has cloud service provider they offer cloud platform for their customers to create and use web-oriented services. The hardware and software resource sharing are possible in cloud with the help of internet and it can be managed and maintained by the third-party cloud service provider. The cloud service provider facilitates cloud computing to increase the capacity or add capability, for example without investing in a new infrastructure, training new people or licensing new software. It is packed with a new infrastructure to improve the services like scalability, elasticity, and business agility, faster start up time, reduced management cost and availability of resources. This special Internet based shared resource has its own conceptual, technical, economical and user experience characteristics. Nowadays, cloud computing has become one of the most important and popular research areas in the field of computer science.

CURRERNT TRENDS IN ARTIFICIAL INTELLIGENCEAND MACHINE LEARNING

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Abstract - This paper provides a comprehensive survey of the state-of-the-art use of Artificial Intelligence (AI) and Machine Learning (ML). While also addressing existing challenges and posing unresolved questions for future research. Adaptions and innovation are extremely important to the manufacturing industry. This development should lead to sustainable manufacturing using new technologies.AI - a revolutionary world has entirely captured our day- to -day lives. It is unique combination of mind and the machines. This study undertakes scoping reviews of the current landscape of AI technology following the PRISMA Frame work, with the aim of identifying the most advanced technologies utilized learning domain. To promote sub stainability smart production, require global perspective of smart production application technology. In this regard thanks to intensive research efforts in the field of artificial intelligence (AI) a number of AI-Based techniques such as Machine learning have already been established in the industry to achieve sustainable manufacturing. New inventions and advancement has been done which are based on AL. In this paper we have presented detail survey of all innovations and current trends in Artificial Intelligence and Machine learning.

NEURALINK: BRAIN COMPUTER INTERFACE

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Abstract-This paper provides an in-depth analysis of Neural ink, an advanced brain-computer interface technology spearheaded by Elon Musk. Neural ink aims to establish a direct communication link between the human brain and computers by embedding sophisticated chips within the brain. This document explores the origins, technological developments, ethical challenges, and the transformative potential of Neural ink in fields such as communication, healthcare, and cognitive enhancement.

BLOCKCHAIN TECHNOLOGY

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Abstract - Block chain, the foundation of Bitcoin, has received extensive attentions recently. Block chain serves as an immutable ledger which allows transactions take place in a decentralized manner. Block chain-based applications are springing up, covering numerous fields including financial services, reputation system and Internet of Things (IoT), and so on. However, there are still many challenges of block chain technology such as scalability and security problems waiting to be overcome. This paper presents a comprehensive overview on block chain technology. We provide an overview of block chain architecture firstly and compare some typical consensus algorithms used in different block chains. Furthermore, technical challenges and recent advances are briefly listed. We also lay out possible future trends for block chain.

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