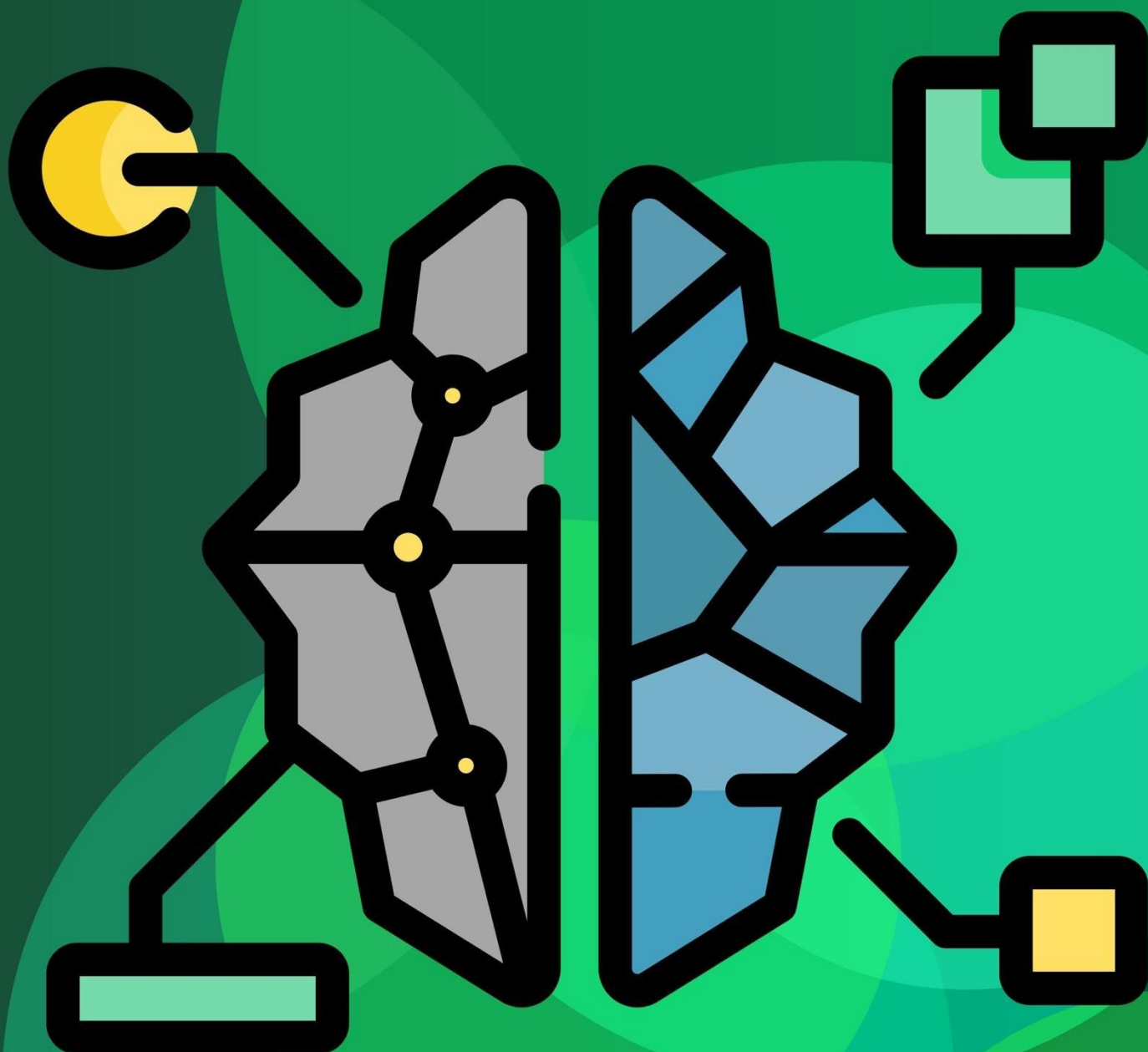


अन्वेषण

Exploring digital world

J
A
N
U
A
R
Y
2
0
2
3



Technical Magazine

AMBALIKA INSTITUTE OF MANAGEMENT & TECHNOLOGY
LUCKNOW

Vision

To embrace students towards becoming computer professionals having problem solving skills, leadership qualities, foster research & innovative ideas inculcating moral values and social concerns.



Mission

- To provide state of art facilities for high quality academic practices.
- To focus advancement of quality & impact of research for the betterment of society.
- To nurture extra-curricular skills and ethical values in students to meet the challenges of building a strong nation

Program Educational Objectives (PEOs)

PEO1

All the graduates will become high class software professionals who could be absorbed in the software industry on the basis of sound academic and technical knowledge gained by them on account of adopting state of the art academic practices.

PEO2

All the graduates will demonstrate their talent in research and development activities involving themselves in such researches which could alleviate the existing problem of the society.

PEO3

All the graduates shall be committed for high moral and ethical standards in solving the societal problems by means of their exposure to various co-curricular and extra-curricular activities.

Program Outcomes (POs)

PO 1 Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of *complex engineering problems*.

PO 2 Problem Analysis: Identify, formulate, review research literature, and analyze *complex engineering problems* reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 3 Design/development of solutions: Design solutions for *complex engineering problems* and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

PO 4 Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO 5 Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to *complex engineering* activities with an understanding of the limitations.

PO 6 The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 7 Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO 8 Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice .

PO 9 Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings

PO 10 Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO 11 Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO 12 Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1

Professional Skills: Attain the ability to design and develop hardware and software based systems, evaluate and recognize potential risks and provide creative solutions.

PSO2

Successful Career and Entrepreneurship: Gain knowledge in diverse areas of IT and experience an environment conducive in cultivating skills for successful career, entrepreneurship and higher studies.

PSO3

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

MESSAGE FROM HEAD OF THE DEPARTMENT

On behalf of Computer Science and Engineering Department, Ambalika Institute of Management & Technology , I am pleased to announce the launching of the January 2023 edition of Technical Magazine of Computer Science and Engineering Department and to make it available to everyone.

This Technical Magazine aims to disseminate achievements in research and developments, while featuring new break-through in the field of Computer Science Engineering and Technology.

The entire Editorial team did their best to provide a platform for distinguished faculties, researchers, industry experts and students to share the latest accomplishments with fellow researchers, faculties, Industry experts and students whereby disseminating the knowledge gained from their technical endeavors.

As HOD, I am open to exploring the opportunities for making this Technical Magazine an exciting and definitive forum for attracting and publishing high impact research contributions that are innovative and transformative, and for making this technicalmagazine serve as a forum for disseminating timely and exciting on-going research that can stimulate innovation. At the end, I would like to thank editorial board members, faculties, Industry experts and students and hope that our collective efforts stimulate further progress in this domain of activity with strong determination at both national and international levels.

Mr. Vinay Kumar

HOD,CSE

Technical Magazine

Department of Computer Science and Engineering

Technical Magazine (JANUARY 2023)

Table of Contents

FACULTY CORNER: TECHNICAL ARTICLES.....	
Health failure detection using AI in a single heartbeat.....	4
Data Science.....	5
5G is the 5 th Generation Mobile network.....	6
Internet of Things.....	8
STUDENT'S CORNER: TECHNICAL ARTICLES.....	10
5G Technology.....	10
Artificial intelligence in Autonomous Vehicles.....	11
Azure spring cloud: fully managed service for spring boot microservices.....	12
No shortage of Machine learning Talent.....	12
DEPARTMENT EVENTS.....	13
Inauguration of CSI student chapter.....	14
Industrial visit of CSE students.....	16
Evolution & Application of Artificial Intelligence.....	17
PLACEMENTS.....	18

FACULTY CORNER: TECHNICAL ARTICLES

Title: Revolutionizing Healthcare: Health Failure Detection Using AI in a Single Heartbeat

Dr Yusuf Parvej

Department of Computer Science & Engineering, AIMT, Lucknow

Introduction: In recent years, the intersection of artificial intelligence (AI) and healthcare has ushered in a new era of medical innovation. Among the most promising advancements is the ability to detect health failure using AI algorithms analyzing data from a single heartbeat. This groundbreaking approach has the potential to revolutionize early disease detection, enable timely interventions, and improve patient outcomes. This article explores the technology behind health failure detection using AI in a single heartbeat, its applications, challenges, and the transformative impact it could have on healthcare.

Understanding the Technology: Health failure detection using AI in a single heartbeat relies on sophisticated algorithms trained to analyze physiological data captured from sensors in real-time. These sensors may include electrocardiogram (ECG) sensors, photoplethysmography (PPG) sensors, or wearable devices capable of monitoring vital signs. The process involves several key steps:

1. **Data Acquisition:** Physiological data, such as ECG waveforms or PPG signals, are collected from a single heartbeat using advanced sensors.
2. **Preprocessing:** The collected data undergoes preprocessing to remove noise, artifacts, and baseline drift, ensuring high-quality input for subsequent analysis.
3. **Feature Extraction:** Relevant features are extracted from the preprocessed data, characterizing the heartbeat in terms of its temporal, spectral, and morphological attributes.
4. **Machine Learning Model:** Various machine learning models, including deep learning architectures such as convolutional neural networks (CNNs) or recurrent neural networks (RNNs), are trained using labeled data to recognize patterns associated with different types of health failure.
5. **Real-Time Inference:** When a new heartbeat is captured, the preprocessed data is fed into the trained AI model for real-time analysis. The model quickly determines whether the heartbeat shows signs of potential health failure.

Applications and Impact: The implications of health failure detection using AI in a single heartbeat are profound across various healthcare domains:

1. **Early Disease Detection:** By analyzing subtle changes in heartbeat patterns, AI algorithms can detect early signs of cardiovascular conditions, including arrhythmias, heart failure, and myocardial infarction, enabling early intervention and treatment.
2. **Personalized Medicine:** AI-driven health failure detection allows for personalized risk stratification and treatment planning, tailored to individual patient profiles and physiological responses.
3. **Remote Monitoring:** Wearable devices equipped with AI-enabled health failure detection capabilities enable continuous remote monitoring of patients' cardiovascular health, empowering individuals to take proactive steps towards better health management.

Challenges and Considerations: Despite its transformative potential, health failure detection using AI in a single heartbeat poses several challenges:

1. **Data Quality and Interpretability:** Ensuring the accuracy and reliability of AI models requires high-quality data and robust validation protocols. Additionally, interpreting AI-generated predictions in a clinical context remains a challenge.
2. **Regulatory and Ethical Considerations:** Regulatory approval, data privacy, and ethical considerations surrounding the collection and analysis of sensitive health data must be addressed to ensure the responsible deployment of AI-driven healthcare technologies.
3. **Integration into Healthcare Systems:** Successfully integrating AI-driven health failure detection tools into existing healthcare systems requires seamless interoperability, clinician adoption, and reimbursement mechanisms.

Conclusion: Health failure detection using AI in a single heartbeat represents a paradigm shift in healthcare, offering unprecedented opportunities for early disease detection, personalized medicine, and remote monitoring. While challenges remain, continued advancements in AI, sensor technology, and healthcare analytics hold the promise of transforming the way we approach cardiovascular care,

ultimately improving patient outcomes and healthcare delivery worldwide.

DATA SCIENCE

Dr. Neeta Rastogi

Department of Computer Science & Engineering, AIMT, LUCKNOW.

Data science is a multidisciplinary blend of data inference, algorithm development, and technology to solve analytically complex problems. At the core is data. Troves of raw information, streaming in and stored in enterprise data warehouses. Much to learn by mining it. Advanced capabilities we can build with it. Data science is ultimately about using this data in creative ways to generate business value:

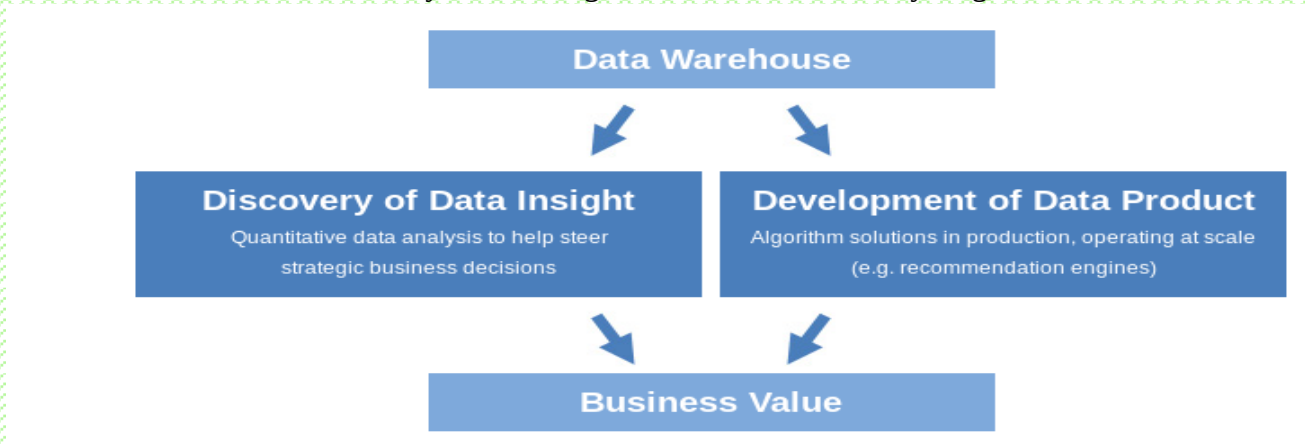


Fig. 1: Data science – the discovery of data insight

This aspect of data science is all about uncovering findings from data. Diving in at a granular level to mine and understand complex behaviours, trends, and inferences. It's about surfacing hidden insight that can help enable companies to make smarter business decisions. For example:

Netflix data mines movie viewing patterns to understand what drives user interest, and uses that to make decisions on which Netflix original series to produce.

Target identifies what are major customer segments within its base and the unique shopping behaviours within those segments, which helps to guide messaging to different market audiences.

Proctor & Gamble utilizes time series models to more clearly understand future demand, which helps plan for production levels more optimally.

How do data scientists mine out insights? It starts with data exploration.

When given a challenging question, data scientists become detectives. They investigate leads and try to understand patterns or characteristics within the data. This requires a big dose of analytical creativity.

Then as needed, data scientists may apply a quantitative technique to get a level deeper

– e.g. inferential models, segmentation analysis, time series forecasting, synthetic control experiments, etc.

5G -5TH Generation Mobile Network

Vipin Rawat

Department of Computer Science & Engineering, AIMT, Lucknow.

Title: Unlocking the Potential of 5G: The Evolution of Mobile Connectivity

Introduction:

In today's fast-paced digital era, where connectivity is king, the arrival of 5G technology has sparked a revolutionary shift in the telecommunications landscape. Fifth-generation mobile networks, or 5G, promise to deliver unprecedented speed, reliability, and connectivity, paving the way for transformative innovations across industries. As we delve into the intricacies of this groundbreaking technology, we uncover its potential to redefine the way we communicate, collaborate, and interact with the world around us.

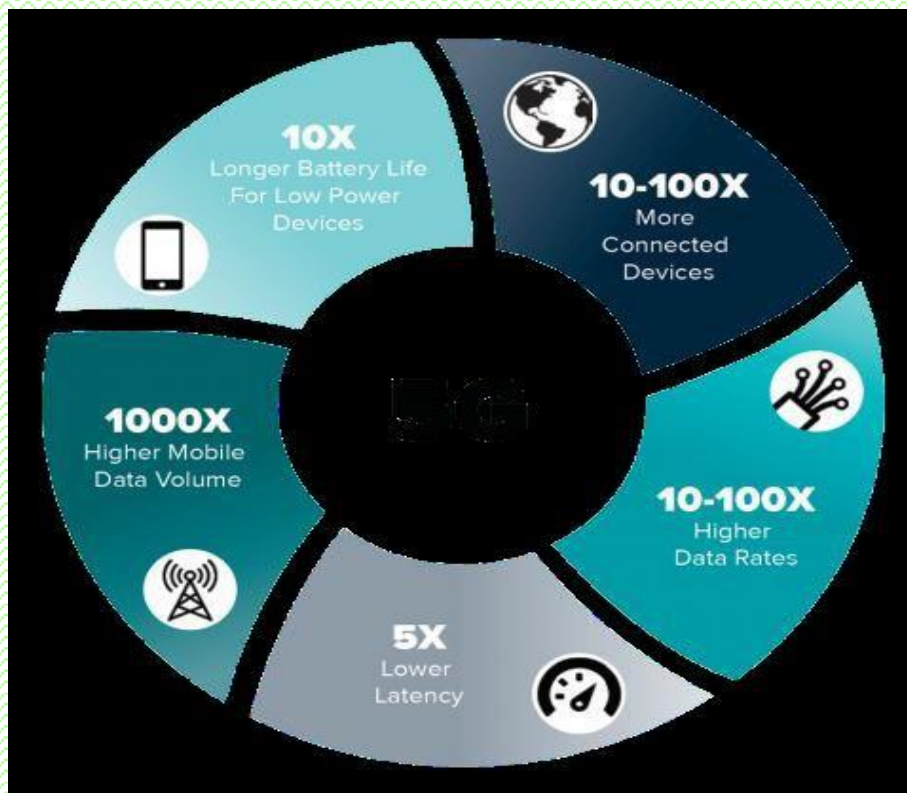


Fig. 2: Facets of 5G

The Dawn of 5G:

The journey towards 5G began with the need for faster and more reliable wireless communication networks to support the ever-growing demands of modern society. Building upon the foundations laid by its predecessors, 5G represents a significant leap forward in terms of speed, capacity, and latency. With data rates potentially reaching up to 100 times faster than 4G LTE networks, 5G holds the promise of enabling seamless connectivity for a wide range of applications, from augmented reality (AR) and virtual reality (VR) to autonomous vehicles and smart cities.

Key Features and Capabilities:

At the heart of 5G technology lies its ability to harness high-frequency radio waves, known as millimeter waves, to transmit data at incredibly fast speeds. This enables 5G networks to support massive device connectivity while significantly reducing latency, the time it takes for data to travel between devices. Additionally, 5G networks utilize advanced antenna technologies such as Massive MIMO (Multiple Input Multiple Output) to enhance signal strength and coverage, ensuring a more reliable and consistent user experience.

Applications and Use Cases:

The impact of 5G extends far beyond faster download speeds and smoother streaming. Its low latency and high bandwidth capabilities unlock a multitude of possibilities across various sectors. In healthcare, for instance, 5G enables real-time remote consultations, surgical procedures, and patient monitoring, revolutionizing the delivery of healthcare services. Similarly, in manufacturing, the ultra-reliable and low-latency communication facilitated by 5G enables the implementation of smart factories and autonomous robotic systems, driving efficiency and productivity to new heights.

Challenges and Considerations:

Despite its immense potential, the widespread adoption of 5G also poses certain challenges and considerations. The deployment of 5G infrastructure requires substantial investment in upgrading existing network infrastructure and building new infrastructure to support the increased demand for connectivity. Moreover, concerns regarding privacy, security, and potential health risks associated with prolonged exposure to radiofrequency radiation have prompted debates and regulatory scrutiny surrounding the rollout of 5G technology.

The Future of Connectivity:

As 5G continues to evolve and expand its footprint, its transformative impact on society will become increasingly evident. From enabling the Internet of Things (IoT) to powering smart cities and autonomous vehicles, 5G has the potential to reshape industries, drive innovation, and improve the quality of life for people around the globe. However, realizing this vision requires collaboration among stakeholders, including governments, telecommunications companies, and technology providers, to address challenges and ensure equitable access to this transformative technology.



Fig 3: Mobile Generations

The new 5G NR air interface introduces many foundational wireless inventions, and in our opinion, the top five are:

1. Scalable OFDM numerology with $2n$ scaling of subcarrier spacing
2. Flexible, dynamic, self-contained TDD sub-frame design
3. Advanced, flexible LDPC channel coding
4. Advanced massive MIMO antenna technologies
5. Advanced spectrum sharing techniques

5G is a unified platform that is more capable than 4G

While 4G LTE focused on delivering much faster mobile broadband services than 3G, 5G is designed to be a unified, more capable platform that will not only elevate mobile broadband experiences but also support new services such as mission-critical communications and the massive IoT. 5G will also natively support all spectrum types (licensed, shared, unlicensed) and bands (low, mid, high), a wide range of deployment models (from traditional macro-cells to hotspots), as well as new ways to interconnect (such as device-to-device and multi-hop mesh).

Conclusion:

In conclusion, 5G represents a quantum leap in mobile connectivity, unlocking new possibilities and reshaping the way we live, work, and interact with the world. As we embark on this journey towards a hyper-connected future, it is imperative to embrace the opportunities presented by 5G while addressing the challenges and concerns that accompany its deployment. By harnessing the full potential of 5G technology, we can pave the way for a more connected, intelligent, and prosperous society for generations to come.

INTERNET OF THINGS

Dr Nikhat Akhtar

Department of Computer Science & Engineering, AIMT, Lucknow.

Title: Embracing the Internet of Things: Transforming Connectivity into Opportunity

Introduction:

In an era defined by digital innovation and interconnectedness, the Internet of Things (IoT) stands as a testament to the transformative power of connectivity. From smart homes and wearable devices to industrial automation and smart cities, the IoT has revolutionized the way we interact with our environment, enabling seamless communication between devices and unlocking new realms of efficiency, convenience, and productivity. As we delve deeper into the realm of IoT, we uncover its far-reaching implications and the boundless opportunities it presents for businesses, communities, and society as a whole.

Understanding the IoT Landscape:

At its core, the Internet of Things refers to the network of interconnected devices embedded with sensors, software, and connectivity capabilities that enable them to collect, exchange, and analyze data. These devices span a diverse range of applications, from consumer electronics such as smart thermostats and fitness trackers to industrial machinery and infrastructure monitoring systems. By harnessing the power of IoT, organizations can gain valuable insights into operations, optimize processes, and deliver personalized experiences to users.



Fig. 4: Internet Of Things

Key Components and Technologies:

The IoT ecosystem comprises several key components and technologies that enable seamless connectivity and data exchange. Sensor technologies play a crucial role in capturing real-time data from the physical world, while connectivity protocols such as Wi-Fi, Bluetooth, and cellular networks facilitate communication between devices. Additionally, cloud computing and edge computing platforms provide the necessary infrastructure for storing, processing, and analyzing the vast amounts of data generated by IoT devices, enabling actionable insights and intelligent decision-making.

Applications and Use Cases:

The applications of IoT are as diverse as they are impactful, spanning across various industries and sectors. In healthcare, IoT devices such as wearable monitors and remote patient monitoring systems enable continuous health monitoring, early detection of medical issues, and personalized treatment plans. In agriculture, IoT sensors and drones are used to monitor soil moisture levels, optimize irrigation schedules, and enhance crop yields. Moreover, in smart cities, IoT-enabled infrastructure such as smart grids, intelligent transportation systems, and environmental monitoring sensors contribute to sustainability, efficiency, and improved quality of life for residents.

Challenges and Considerations:

Despite its immense potential, the widespread adoption of IoT also presents several challenges and considerations. Security and privacy concerns loom large, as the proliferation of connected devices increases the risk of data breaches and cyberattacks. Interoperability issues, standards fragmentation, and scalability challenges further complicate the deployment and management of IoT solutions. Moreover, ethical considerations surrounding data ownership, consent, and transparency necessitate careful consideration and regulatory frameworks to ensure responsible and ethical use of IoT technologies.

The Future of Connectivity:

As IoT continues to evolve and proliferate, its impact on society will become increasingly pronounced. From enabling smarter, more efficient cities to revolutionizing healthcare, agriculture, and manufacturing, IoT holds the promise of driving innovation, enhancing productivity, and improving quality of life for people around the globe. However, realizing this vision requires collaboration among stakeholders, including governments, industry players, and academia, to address challenges, foster innovation, and ensure equitable access to IoT technologies.

Conclusion:

In conclusion, the Internet of Things represents a paradigm shift in connectivity, transforming the way we interact with the world around us and unlocking new realms of possibility. By harnessing the power of IoT, organizations can gain actionable insights, optimize processes, and deliver enhanced experiences to users. However, realizing the full potential of IoT requires concerted efforts to address challenges, foster innovation, and promote responsible and ethical use of connected technologies. As we embrace the IoT revolution, we pave the way for a more connected, intelligent, and sustainable future for generations to come. Internet of Things is the concept of connecting any device (so long as it has an on/off switch) to the Internet and other connected devices. The IoT is a giant network of connected things and people – all of which collect and share data about the way they are used and about the environment around them.

STUDENT'S CORNER: TECHNICAL ARTICLES

5G TECHNOLOGY

REETU VERMA, CSE

5G technology is a breakthrough, with a goal is to design a real wireless world that is free from the obstacles of the earlier generation. The 5G technology includes all major and advanced features which make it popular and in huge demand in the future. It offers bidirectional huge bandwidth. It makes the wireless world with no more limitations with access and zone issues. It creates one unified global standard. The advanced charge interfaces of 5G technology make it a lot of enticing and effective. The 5G technology is providing up to 25 Mbps connectivity speeds. 5G technology also supports virtual private networks. Security increases and no one can easily hack the system but this problem occurs with the 4G technology. Simply said 5G is widely believed to be smarter, faster and better than 4G. As compared to speeds 5G is 100 times faster than 4G technology. 5G will be used to fix bandwidth issues.

There are major benefits of 5G Technology like some are What if you can access your office desktop right now while you are laying on your bed? What if you can identify your stolen phone in a nanosecond? What if you're mobile can identify the best server and may more. Some Specific Uses of 5G technologies are like it will not only be faster than current 4G but also can revolutionize other sectors such as production, automotive, healthcare, and energy. 5G will replace the experience and support up to 10 to 20 GBPS download speed. It's equivalent to a fibre optic internet connection accessed wirelessly. The two components, 'Radio access network' and 'Core network' have varied kinds of facilities together with little cells, towers, masts and are dedicated in-building and residential systems that connect mobile users and wireless devices to the main core network. Low latency and IOT are main features for development using a supercharged 5G wireless network. IoT connects every appliance with sensor and it could be better developed with the help of 5G technology like Logistic, Shipping industry and Smart farming.

Smart towers: Application of 5G Technology

The Smart Towers by QOQNO are introduced in Indian Mobile Congress, 2019. The smart tower is the latest make in India project that uses the 5G technology. The smart tower is a modular, Scalable and extendable tower that integrates end to end city-centric services, helps in accessing helpful information and sector-based transactions. They are designed in such a way that they can deliver an array of diverse citizen needs, municipality administrative needs and ensuring public safety. The smart towers can be used for multiple targets. It has a different section for different functioning. The section includes the emergency services section, smart banner section, security cameras, Drone system. The first and the lower section is the Emergency services. If any an accident has happened nearby, people can press the switch to avail the security services, it includes the ambulance, police services and in the minimum time, the emergency services would be provided. The next section, Smart banner section keeps an eye on the people watching the banners and advertisements. The smart camera included in this section will look for the movement of eye-ball of the person and take into account how many people have seen the banners and for how much time. Above it, there are three different cameras installed parallelly which is used for security purposes and has a higher range of visibility. If any person tries to skip the traffic systems then these cameras detect the person's information. So, from this section traffic controlling is done. The last and the above most section of the smart tower includes the drone system. In a nutshell, this smart tower includes all the basic amenities needed by the city for its proper working. Whether it is of security or emergency services this tower has all the basic needs for a city. These types of towers are already installed by the company in some parts of Chennai. And the initial cost of the installation is around 80 to 90 lacks and surely in the next years, it will be set up in many parts of the country.

ARTIFICIAL INTELLIGENCE IN AUTONOMOUS VEHICLES

ASHEESH KUMAR, CSE

Artificial Intelligence is the intelligence that is displayed by machines. AI can perform functions like learning, problem-solving and implementation in various fields. AI has an application in various fields like machine learning, natural language processing, robotics, medical diagnosis, computer vision, and planning. Autonomous vehicles are one of the greatest uses of AI. Autonomous vehicles are vehicles that are self-driven, driverless or robot-driven cars. It is a vehicle that can sense the environment around it and moves with no input or partial input by the human. These driverless cars combine a variety of sensors to understand and realize their surroundings. These sensors are sonar, odometer and inertial measuring units, radar and GPS (Global Positioning System). The autonomous vehicles become aware of the obstacles coming their way and also identify the suitable navigation paths. Though people think that self-drive cars are the future, there is still a no. of challenges in its way. These cars cannot recognize the presence of bicyclists and pedestrians on roads, as well as any animal which might appear on a road. AI will be used for speech recognition, eye tracking, the camera capturing, road condition evaluation, virtual assistance, and driver monitoring. The autonomous vehicles are provided with cognitive functions and logical as well as decision-making capabilities just like the human drivers possess so that they can adjust to any situation of traffic to avoid any accidents. These cars are provided with these sensors and other communication devices so that they can store this huge amount of data and AI enables them to analyze the way the car should drive. This data is processed by supercomputers and other data communication systems. The radars and cameras are used to generate the surrounding area, the traffic conditions and give all the valuable inputs to the autonomous driving cloud platform. There is an intelligent agent that makes use of AI algorithms to take meaningful and correct decisions. All the previous data is also stored which might help in making future decisions if any same condition is encountered. All the driving experiences are stored in the database so that safer and better experiences can be created for the users. Artificial Intelligence, especially the neural networks and deep learning are the key factors in the proper and safe functioning of the autonomous vehicles.



Fig. 6: AI controlled vehicle

AZURE SPRING CLOUD: FULLY MANAGED SERVICE FOR SPRING BOOT MICROSERVICES

SURAJ AWASTHI,CSE

As customers have moved their workloads to the cloud, we've seen a growth in the use of cloud-native architectures, particularly micro-services. Micro-service-based architectures help improve scalability and velocity but implementing them can pose challenges. For many Java developers, Spring Boot and Spring Cloud have helped address these challenges, providing a robust platform with well-established patterns for developing and operating micro-service applications. But creating and maintaining a Spring Cloud environment requires work, such as setting up the infrastructure for dynamic scaling, installing and managing multiple components, and wiring up the application to your logging infrastructure. To help make it simpler to deploy and operate Spring Cloud applications, together with Pivotal, Microsoft has created Azure Spring Cloud. Azure Spring Cloud is jointly built, operated, and supported by both Pivotal and Microsoft. This means that you can use Azure Spring Cloud for your most demanding applications and know that both Pivotal and Microsoft are standing behind the service to ensure your success. High productivity development Azure Spring Cloud abstracts away the complexity of infrastructure management and Spring Cloud middleware management, so you can focus on building your business logic and let Azure take care of dynamic scaling, security patches, compliance standards, and high availability. With a few clicks, you can provision an Azure Spring Cloud instance. After configuring a couple of dependencies in your pom file, your Spring Cloud app is automatically wired up with Spring Cloud Config Server and Service Registry. Furthermore, you can deploy and scale Spring Boot applications in seconds. Ease of monitoring With out-of-the-box support for aggregating logs, metrics, and distributed app traces into Azure Monitor, you can easily visualize how your applications are performing, detect and diagnose issues across micro-service applications and their dependencies, drill into monitoring data for troubleshooting and gain a better understanding of what end-users do with your apps.

Open-source innovation with Spring integrations Azure Spring Cloud sets up the compute foundation for cloud-native Spring applications. From there, Azure Spring Cloud makes it simple to connect to data services such as Azure SQL Database, MySQL, PostgreSQL, or Cosmos DB to enable enterprise-grade end-user authentication and authorization using Azure Active Directory, to bind cloud streams with Service Bus or Event Hubs, and to load and manage secrets with Azure Key Vault.

No Shortage of Machine Learning Talent

PRABAL SHUKLA, IV year, CSE

If you thought learning some machine learning models and making a few projects on data would be sufficient to land you a job in the financial sector then the report on machine learning in financial services from the Bank of England and Financial Conduct Authority (FCA) will come as a bit of a shock. The report is based on a survey of 106 banks and finance firms in London. It turns out that, yes, machine learning is being used in banks. But, no, it's not hard to find anyone to fill the roles and that this is the least of the worries as machine learning is rolled out across the finance sector. The Bank of England and FCA also asked survey respondents what their problems were in implementing machine learning solutions. As the chart below shows, a shortage of machine learning talent was not top of the list.

Instead, banks ranked machine learning talent shortages as a negligible constraint alongside the horror of maintaining old legacy systems. Other problems faced by investment capital firms are the lack of explain ability and insufficient data.

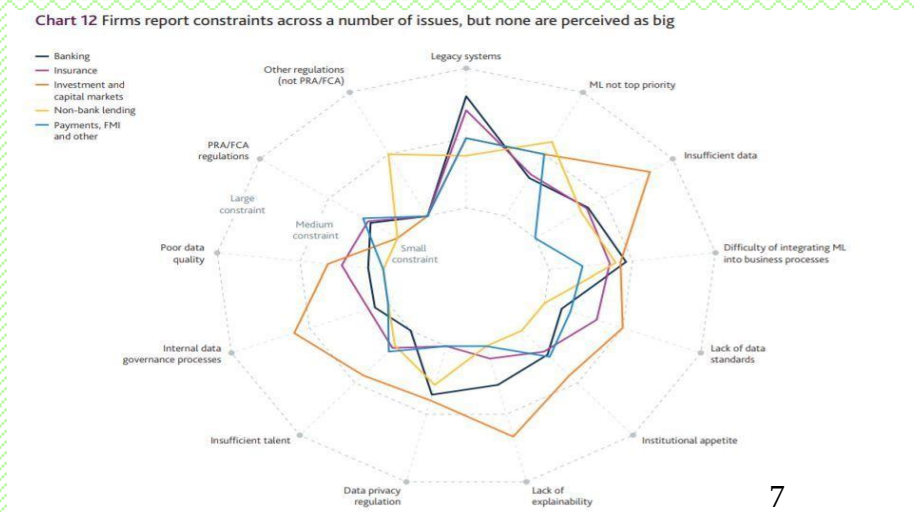


Fig. 7: Firms Reports

Another key factor to take into consideration is that Firms mostly design and develop ML applications in-house. However, they sometimes rely on third-party providers for the underlying platforms and infrastructure, such as cloud computing.

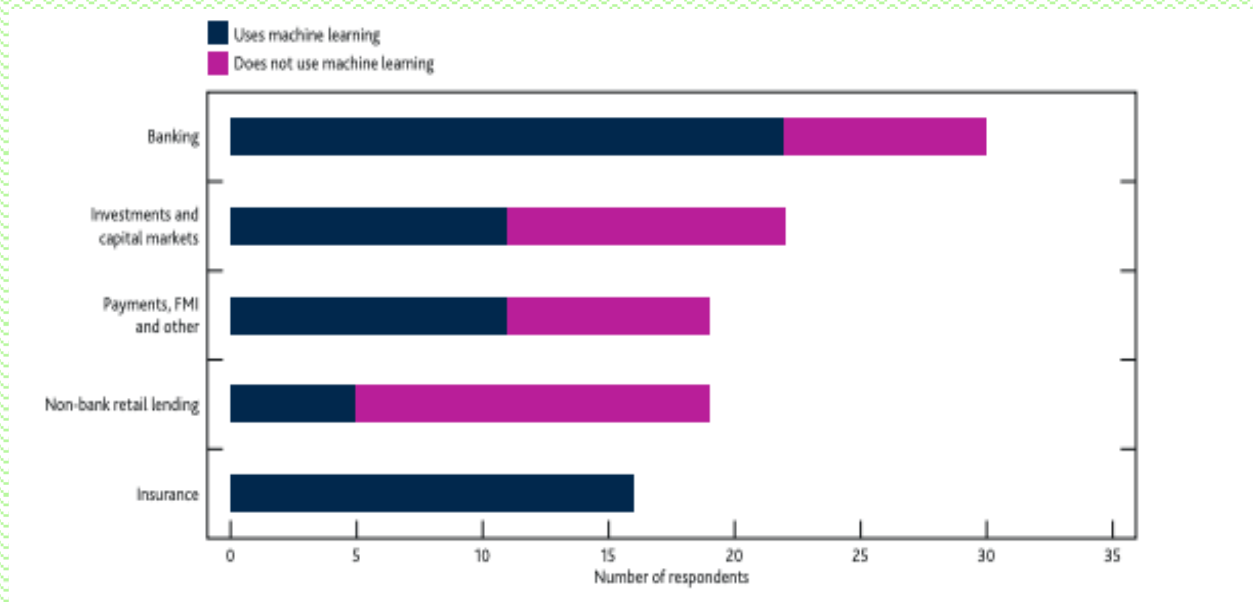


Fig. 8: MACHINE LEARNINGS USE IN SECTORS

DEPARTMENT EVENTS

Inauguration of CSI Student Chapter



SEMINAR
BY
COMPUTER SOCIETY OF INDIA
(CSI) LUCKNOW CHAPTER
INAUGURATING
STUDENT CHAPTER
FOR
AMBALIKA INSTITUTE OF MANAGEMENT & TECHNOLOGY

Dr. Shyam Kumar Garg
Hon. Secretary, CSI Lucknow Chapter
(Speaker of Tech Talk)

Mr. Arvind Sharma
Regional Vice President Region 1
(2019-2021)

STUDENTS BRANCH COUNSELLER
DR. NIKHAT AKHTAR
ASSOCIATE PROFESSOR
CS&E DEPARTMENT(AIMT)

FACULTY CORDINATOR
MR. PAVAN MISHRA
ASST. PROFESSOR
CS&E DEPARTMENT (AIMT)

Type of event: Inauguration Ceremony

Title of the event : CSI Student Chapter Inauguration Ceremony

Chief Guest: Mr Arvind Sharma(Regional Vice President Region 1)

Description: Inauguration Ceremony of CSI in CS Department. of AIMT Lucknow. The Dept. of Computer Science had inaugurated the Computer Society of India (CSI) – Student Chapter, on 11 June 2022 from 1:30 PM to 4:30 PM at AIMT. The Inauguration Ceremony of CSI was attended by Second Year & Third Year CS Students. The guest of honor for the event was Dr shyam kumar Garg CSI and Chief guest of the event was Mr Arvind Sharma
Total 150 students from CS department have attended the event.
The guests had given the overview on the working of CSI and elaborated on the benefits of having CSI membership. The Inauguration Ceremony of CSI was very much appreciated by the student's fraternity and the faculty members.
The session was coordinated by Dr Nikhat Akhtar & Mr Pavan Mishra, Assistant Professor, IT Dept.

Organized by : Computer Science, **Date:** 11 JUNE 2022 ,**Participants attended:** 155

E V E N T S



GLIMPSE OF INDUSTRIAL VISIT



E
V
E
N
T
S

EVOLUTION & APPLICATION OF ARTIFICIAL INTELLIGENCE



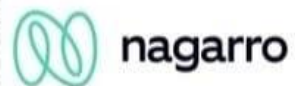
PLACEMENTS



AMBALIKA
GROUP OF INSTITUTIONS

congratulations

For getting offer by 5 companies



SARTHAK DIXIT
B.TECH CSE



ADMISSIONS OPEN



9651828007
9651828006

www.aimt.edu.in



AMBALIKA
GROUP OF INSTITUTIONS

#placed

RINEX
REST ABOVE THE BEST

Our students got placed in
Rinex Technologies



Priyanshi



Aakash Tiwari



AYUSH KUMAR PRAJAPATI



VISHAL PRAJAPATI



GARIMA SINGH



Ayush singh



Saumya Singh Rathore



Mohammad Imamuddin

Saurabh Singh, Gaurav Bajpai, Astha Rajput, Adarsh Kumar Awasthi, Prajjwal Verma

CONGRATULATIONS!



AMBALIKA
GROUP OF INSTITUTIONS

Congratulations !

AMBALIKA is glad to
announce the placement of our Student



Mohd. Ahsan

B.Tech CSE



We wish him
all the best for his future endeavours



**Computer Science &
Engg.**

**Computer Science &
Engg.
JAN 2023**

Patrons

**Dr. Alok Mishra
Director**

**Dr. Shweta Mishra
Additional Director**

**Executive Director
Mr. Ambika Mishra**

Editor Team Co-ordinator
Ms. Divya
Asst. Professor(CSE)

Editor Team Co-ordinator
Mr. Vipin Rawat
Asst. Professor(CSE)

**Director
Dr. Ashutosh Diwivedi**

Ambalika Institute of Management & Technology

NBA Accredited Branches (CSE)

Maurawan Road, Mohanlalganj, Lucknow, UP
Pin Code : 226301