## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

**Vision of Department:-**

To lead in technical, quality education, innovation, research for development of sustainable & inclusive technology for the society.

**Mission of Department:-**

- **M1 :** To create ambience of academic excellence through state of art infrastructure
- **M2 :** To create student-centric pedagogy that will lead to employability.
- **M3 :** To create a software engineering professional with knowledge of multidisciplinary fields, can provide innovative products & service to society.
- **M4 :** To train and motivate the students for lifelong learning, employability, and entrepreneurship

## Program Educational Objectives (PEOs)

PEO1: To provide knowledge of sound mathematical principles underlying various programming concepts.

PEO2: To develop an ability to understand complex issues in the analysis, design, implementation and operation of information systems.

PEO3: To provide knowledge of mechanisms for building large-scale computer-based systems.

PEO4: To develop an ability to provide computer-based solutions to the problems from other disciplines of science and engineering.

PEO5: To impart skills necessary for adapting rapid changes taking place in the field of information and communication technologies.

## Program Specific Outcomes (PSO's)

PSO1 : To be able to give solution in networking, OOP, web development, cloud, IOT on real life application using open source software.

PSO2 : To be able to acquaint with modern trends in industry/research giving novel solution to existing social problems.

# Publications

| Sr. No. | Title of paper | Name of the author/s | ISSN Number |
|---|---|---|---|
| 1 | Blockchain based record date management system using artificial intelligence | Dr. G G Chiddarwar, Dr. S V Balashetwar, Dr. B Vasagi | 1303-5150 |
| 2 | Smartphone User Behaviour Predication Using AI | Mayur Ramesh Chavan, Akshay Avadhut Kulkarni, Mohammad Kaif Shakil Mulla, Ashish Hanmant Mahadik, Omkar Jagnnath Waghmare, Dr. S V Balshetwar | 2321-9653 |
| 3 | Cursor Global Positioning framework | Prof. K P Jagtap, Pranav Mithari, vishwesh Mangrule, Sarina sheikh, Saif Sheikh. | - |
| 4 | A study On:learning Management System (LMS)for Education in Cloud Technology | Prof.U.M.Bhokare,Aniruddha S.nalawade ,Snehal S.Shinde,Amruta R.Widhate,Prajkta M.shinde | - |
| 5 | Chatbot for Children Assistance | Ankita Dadaso Raskar, Akshata Santosh Dongare, Afrin Salim Inamdar , Rutuja Bharat Kamble, , Pranali Laxman Patil, Dr. S V Balshetwar | 2321-9653 |
| 6 | Customer recommendation and notification using artificial intelligence and machine learning | Dr. S V Balashetwar, Dr. GG Chiddarwar, Dr. B Vasagi | 1303-5150 |

# Research

| Sr. No. | Title | Inventor's Name | Patent Number |
|---|---|---|---|
| 1 | AWS-Cloud and Google Big Query Data Performance Improved using Machine and Deep Learning Programming | Dr. S.V. Balshetwar | 2021101128 |
| 2 | Predict hether income exceeds defined set threshold per year using data science | Dr. S.V. Balshetwar | 202141007440 |
| 3 | Content-based image retrieval shape features using deep Learning | Dr. S.V. Balshetwar | 202221011557 |

## Quantum Computing: The Future of Technology
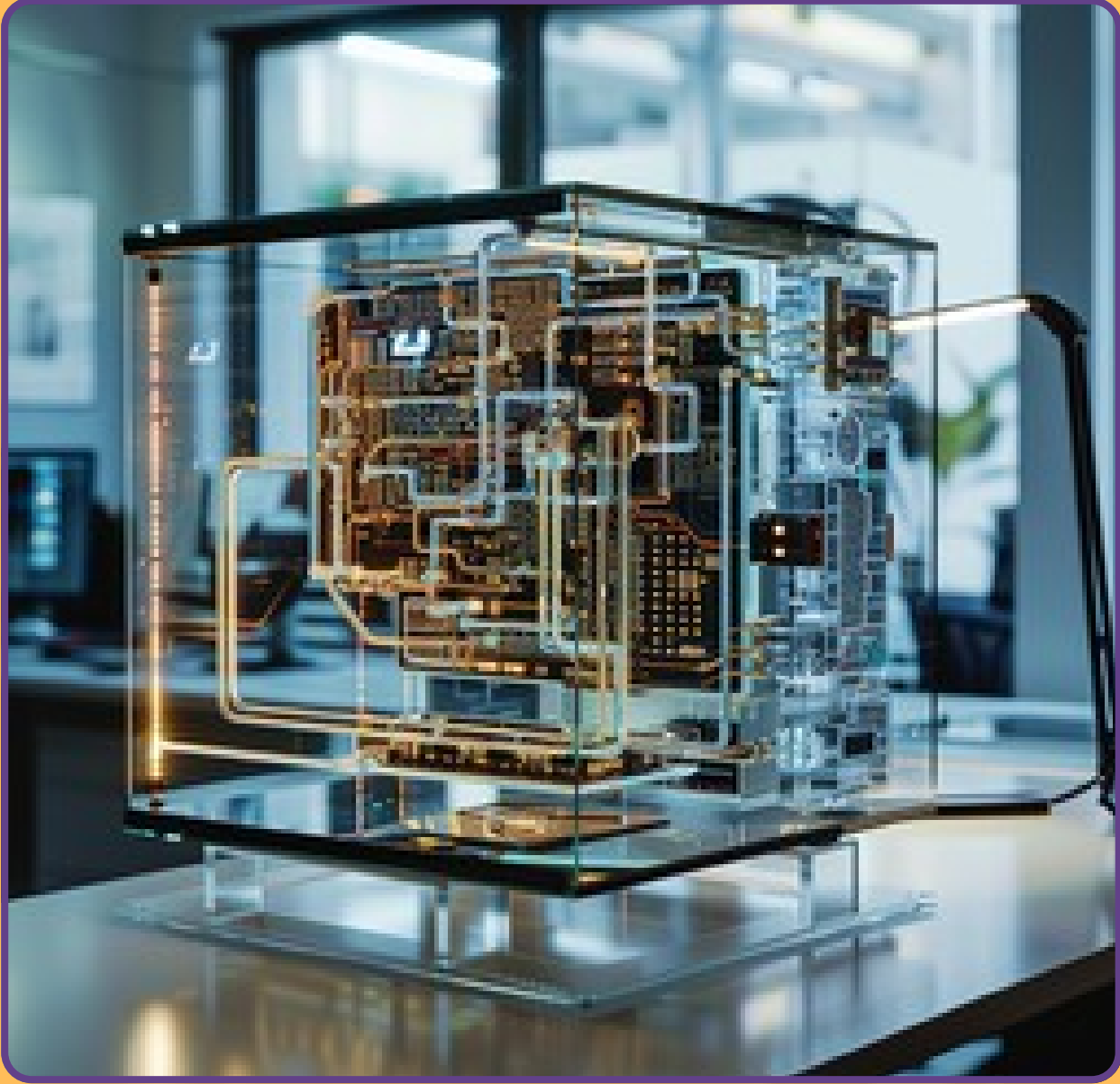


Quantum computing is revolutionizing the world of technology by leveraging the principles of quantum mechanics to process information at unprecedented speeds. Unlike classical computers that use bits to represent data as 0s and 1s, quantum computers use quantum bits or qubits. These qubits can exist in multiple states simultaneously, allowing for faster and more efficient computation. In 2021-2022, quantum computing made significant progress with companies like IBM and Google pushing the boundaries of quantum hardware and software. Quantum algorithms promise breakthroughs in fields like cryptography, material science, and artificial intelligence (AI). However, challenges like error correction and quantum coherence still need to be solved before quantum computing becomes widely accessible.

## Artificial Intelligence in Healthcare: Revolutionizing Medicine
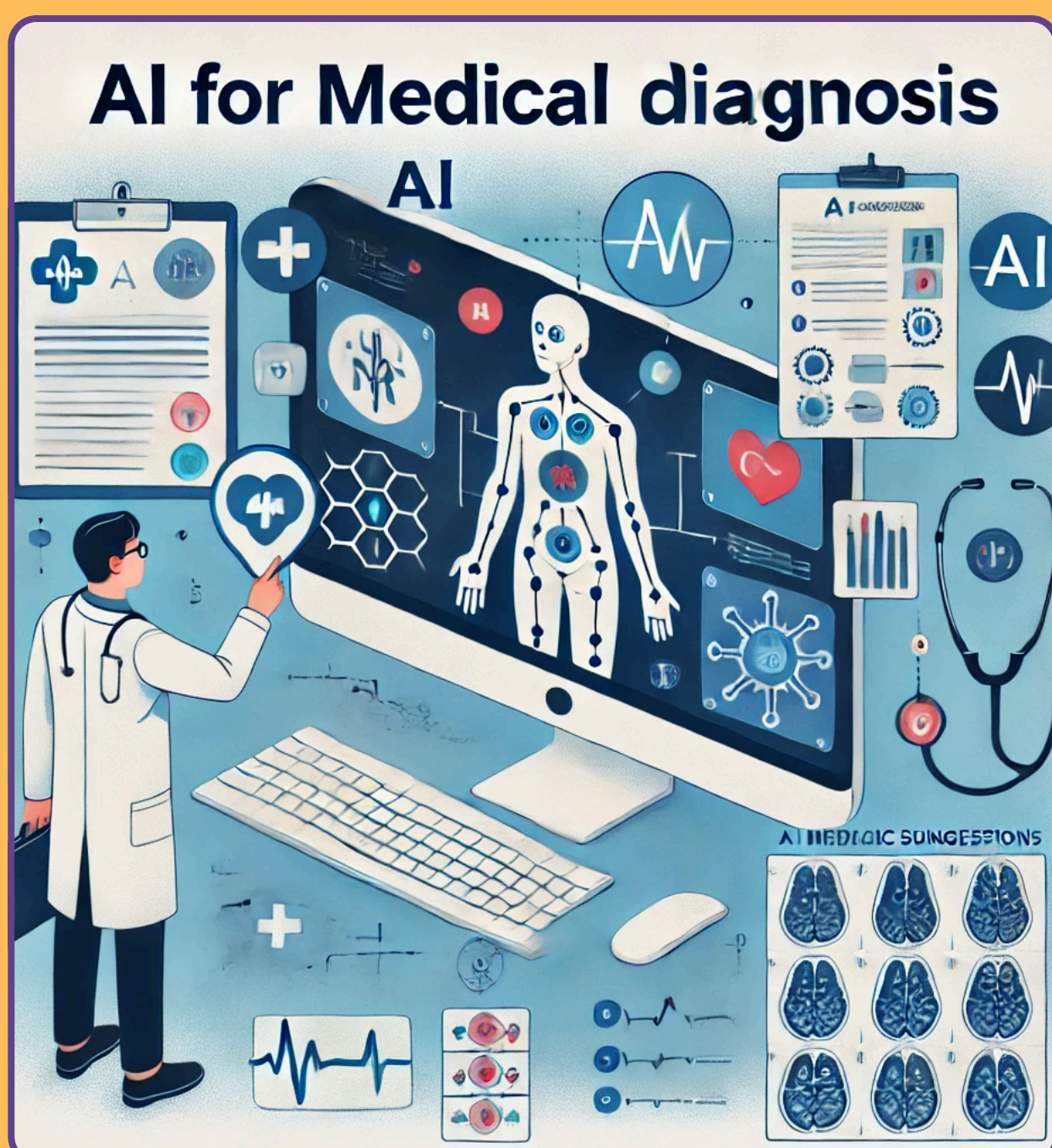


Artificial Intelligence (AI) has been making significant strides in healthcare, particularly in 2021-2022. AI algorithms are being used to analyze medical data, such as X-rays, MRI scans, and genetic information, to help diagnose diseases more accurately and quickly. Machine learning models are also being used to predict patient outcomes, recommend personalized treatments, and streamline administrative tasks like scheduling and billing. AI's role in drug discovery is also growing, with models predicting how new drugs will interact with the human body. The integration of AI in healthcare is not without challenges, such as data privacy concerns and the need for proper regulation, but it holds immense potential to save lives and reduce healthcare costs.

# Blockchain Beyond Cryptocurrencies: Decentralized Applications (DApps)
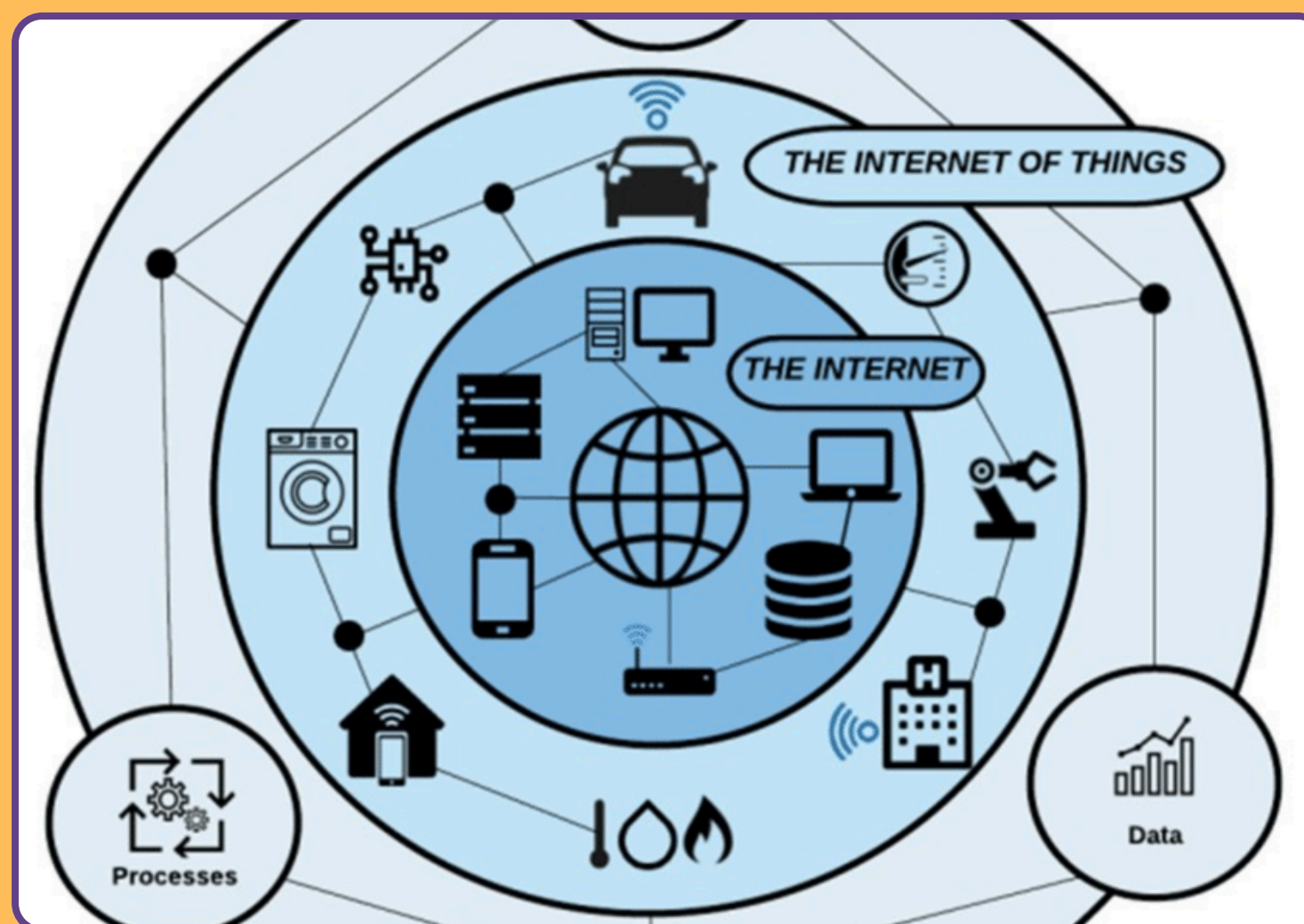


Blockchain technology is much more than the foundation for cryptocurrencies like Bitcoin. In 2021-2022, blockchain's potential in fields like decentralized finance (DeFi), supply chain management, and even voting systems became a significant focus. A blockchain is a decentralized, distributed ledger that records transactions in a secure, transparent, and immutable way. This makes it ideal for applications that require transparency and accountability.

Decentralized Applications (DApps) are software applications that run on blockchain networks, offering enhanced security and reducing the reliance on centralized authorities. For example, blockchain is revolutionizing supply chain transparency by allowing consumers to trace the journey of a product from manufacturer to store. Additionally, blockchain-based voting systems are gaining traction as a means to ensure fair, tamper-proof elections. In 2022, the adoption of blockchain in enterprise-level applications grew, with industries exploring how to implement this technology to streamline processes and improve security.

# AI in Cybersecurity: Protecting Digital Assets
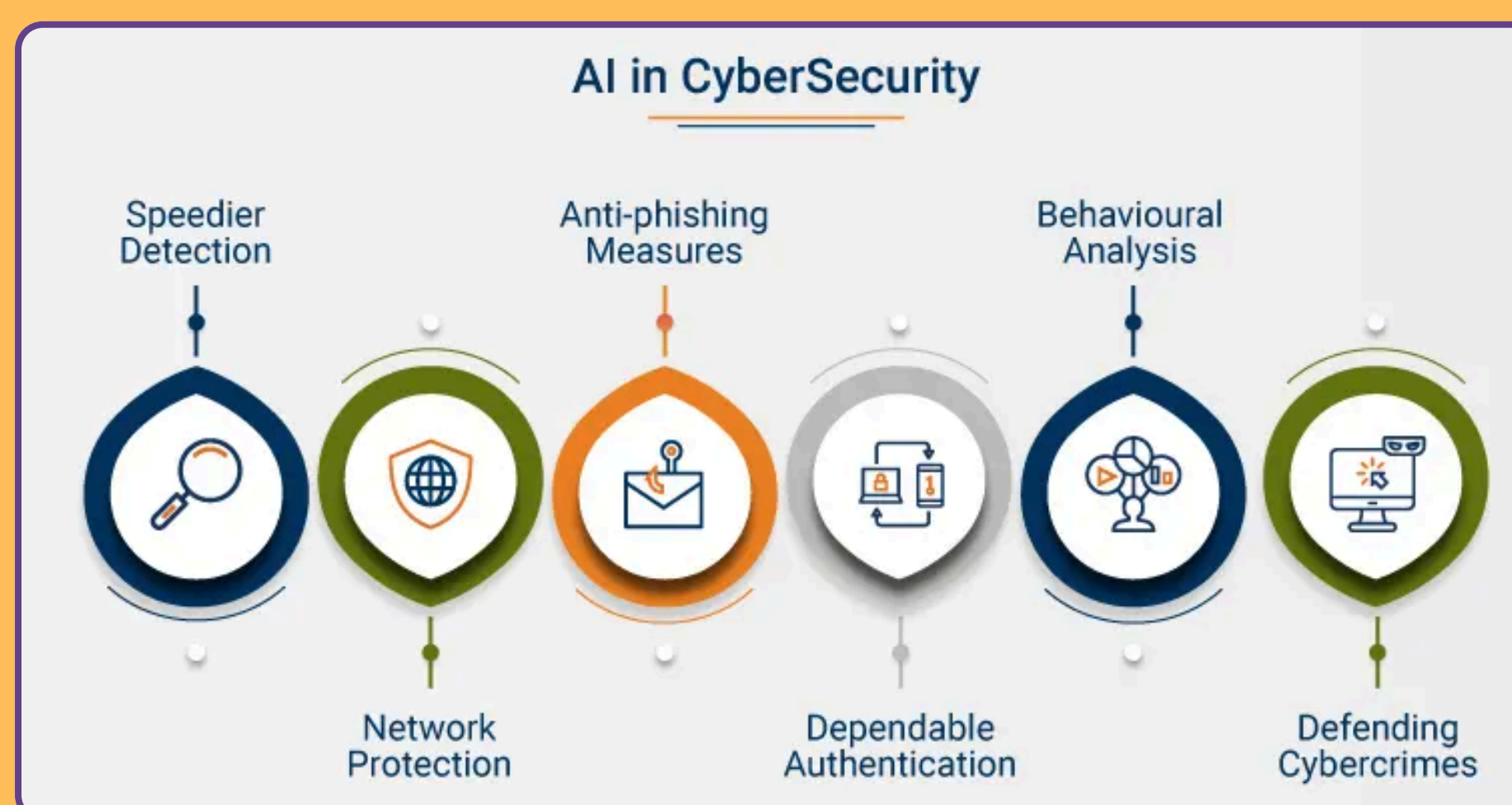


Artificial Intelligence (AI) is playing an increasingly vital role in cybersecurity, especially as cyber threats become more sophisticated. AI algorithms are being used to detect anomalies in network traffic, identify potential vulnerabilities, and prevent cyber-attacks in real-time. In 2021-2022, AI-driven solutions like machine learning-based malware detection and predictive analytics became critical for businesses aiming to safeguard their data and systems from evolving cyber threats.

# Activities



**Yasho Techfest 2022**



**Farewell Program**



**Teacher's Day**



**Guest Lecture**



**Workshop**



**seminar**

# Facilities



**Computer Lab**



**Library**



**Digital Classroom**



**Hostel**



**Transportation**



**Wi-Fi Campus**