

BITS & BYTES

Department of Computer Science
Parvatibai Chowgule College of Arts & Science (Autonomous)



About Bits & Bytes...

Hey Tech Enthusiasts!
Welcome to another exciting edition of Bits & Bytes!!

This is your go-to space for the latest buzz in the world of technology, from groundbreaking innovations to student success stories and department highlights.
In this issue, get ready to explore thrilling events, celebrate achievements, and dive into fascinating tech trends that are shaping the future.

This newsletter is a celebration of our curiosity, creativity, and passion for technology. So grab a coffee, sit back, and enjoy the latest updates from our tech-savvy community!!

Happy Reading!



Editor:
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DEPARTMENTAL ACTIVITIES

1) Industrial Visit

An alumni-facilitated industrial visit :“Connecting Theory to Practice” was Scheduled on 4th October 2024 and visited Creative Capsule Verna, Goa . A total of 22 students and 4 faculty members visited and they attended an interactive session on AI, Business Intelligence and Machine Learning the session, which focused on Artificial Intelligence (AI), Business Intelligence (BI), and Machine Learning (ML). Experts in these fields shared their knowledge with the attendees, providing valuable insights and answering questions about the future of these technologies. The visit also included a tour of the office, where participants had the opportunity to clarify doubts and gain a better understanding of the industry’s direction.



2) Workshop on Recent Trends in Computer Science

The Department of Computer Science organized the Workshop on “Recent trends in computer science Decode the Magic: How ChatGPT understands Language.” on the 14th of October 2024. The Resource person for the workshop was Riya Naik, PhD Research Scholar, K K Birla BITS Pilani Goa Campus. The workshop aimed to demonstrate how ChatGPT works using large language models (LLMs). It provided participants with an interactive exploration of AI, focusing on ChatGPT’s text generation and interpretation, powered by deep learning and natural language processing (NLP). A total of 9 students and 9 faculty members attended the workshop.



3)FDP on ‘Machine Learning: From Theory to Practice’



The Department of Computer Science organized a Faculty Development Programme (FDP) on ‘Machine Learning: From Theory to Practice’ on 24th October 2024. The objective of organizing the Faculty Development Program (FDP) on “Machine Learning: From Theory to Practice” was to strengthen both the theoretical understanding and practical skills of our faculty members in the field of Machine Learning. Dr. Shaila Ghanti, Head of the Computer Science Department, welcomed the faculty and the resource persons Dr. Harikrishnan N B , Assistant Professor in the Department of Computer Science and Information Systems at BITS Pilani K K Birla Goa Campus,



Dr. Gargi Prabhu, Visiting Assistant Professor in the Department of CS & IS, BITS Pilani, K K Birla Goa Campus.. Ms. Sanas Shaikh introduced the resource persons to the participants. Dr. Harikrishnan emphasized the growing importance of Machine Learning, explaining its evolution and laying the groundwork with an overview of linear algebra concepts crucial for Machine Learning. Hands-on sessions were conducted on algorithms such as Linear Regression, K-Nearest Neighbors (KNN), and Decision Trees, allowing participants to apply these techniques. Dr. Gargi led a session focused on the use of Machine Learning algorithms in research, highlighting their application in energy conservation. She demonstrated how Machine Learning techniques can be used to predict power consumption of CUDA kernels.

ARTICLE'S

Famous Women in Technology Field

1. Ada Lovelace – The First Computer Programmer

Many people consider English mathematician Ada Lovelace to be the first person to program a computer. She became the first programmer in history in the 1840s when she contributed to Charles Babbage's Analytical Engine and created the first machine-readable algorithm. Her contributions established the groundwork for contemporary computing.



2. Grace Hopper- The Queen of Software

Grace Hopper was a rear admiral in the United States Navy and a computer scientist. She created the first compiler, which converted machine language into human-readable code. Additionally, she was instrumental in the creation of one of the earliest high-level programming languages, COBOL. Her efforts increased the common public's access to computers.

3. Hedy Lamarr – Inventor of Wi-Fi Technology Hedy Lamarr was a talented inventor in addition to being a well-known Hollywood actress. She helped create a frequency-hopping communication method to thwart enemy eavesdropping during World War II. Later, this technology served as the basis for contemporary Bluetooth, GPS, and Wi-Fi.



4. Radia Perlman – The Mother of the Internet. Hedy Lamarr was not only a famous Hollywood actress but also a gifted inventor. During World War II, she contributed to the development of a frequency-hopping communication technique to prevent enemy eavesdropping. Later, modern Bluetooth, GPS, and Wi-Fi were built on top of this technology.

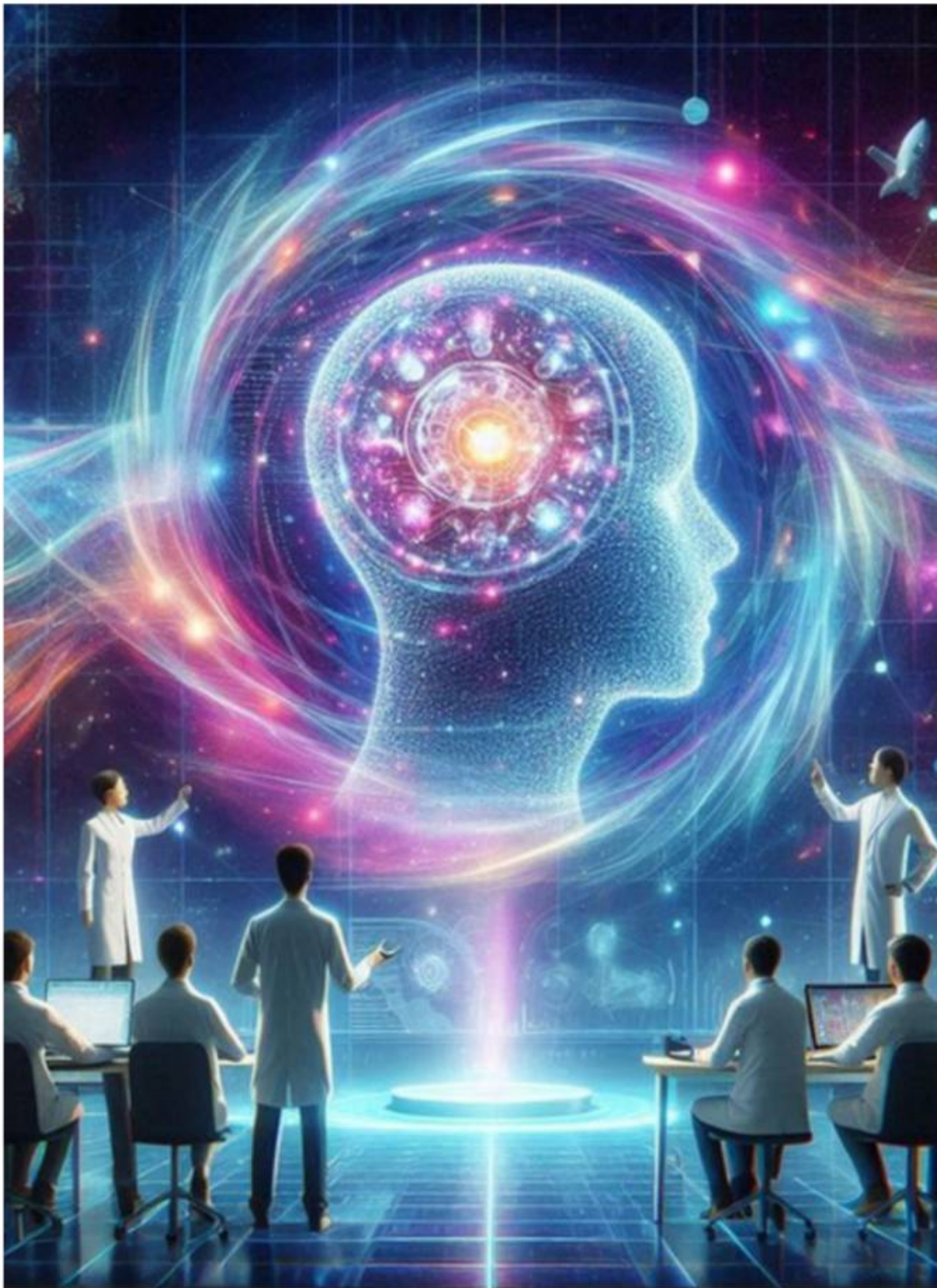


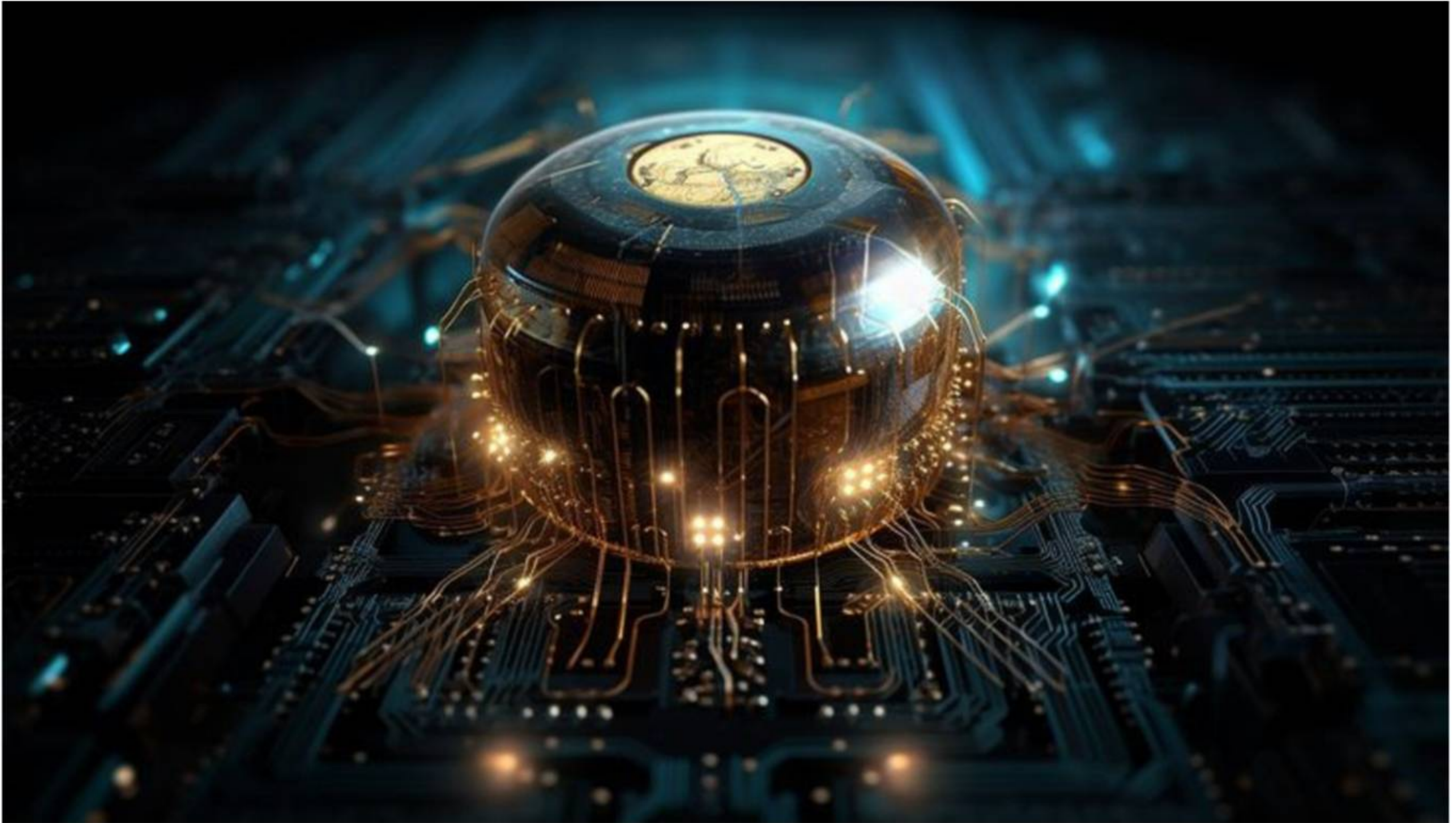
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Breakthroughs in AI and Quantum Computing

Artificial Intelligence (AI) and quantum computing are advancing rapidly, promising revolutionary changes across industries. AI models like OpenAI's ChatGPT and Google's Gemini are becoming more sophisticated, offering improved reasoning, real-time learning, and multimodal capabilities. AI is also making strides in robotics, self-driving technology, and personalized medicine, enhancing efficiency in sectors like healthcare and finance.

A major breakthrough in AI involves emotion recognition, where machines can analyze speech and facial expressions to interpret human emotions. This advancement is improving applications in mental health, customer service, and education.





On the quantum computing front, IBM recently introduced a 1,000-qubit quantum processor, a crucial step toward practical quantum applications. Companies like Google are also investing in quantum error correction to make these computers more reliable. Quantum computing holds the potential to revolutionize cryptography, drug discovery, and climate modeling by solving complex problems exponentially faster than classical computers.

The future may see AI and quantum computing merging, enabling AI models to process vast amounts of data at unprecedented speeds. This convergence could lead to breakthroughs in scientific research, logistics, and financial forecasting, transforming how we approach some of the world's most complex challenges.



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Top 15 Fun Tech & Computer Science Facts!

1. The first computer mouse (1964) was made of wood!
2. The term "bug" in programming comes from an actual moth found in a computer in 1947.
3. The first domain name ever registered was symbolics.com in 1985.
4. Amazon, Google, and Apple all started in garages!
5. The world's first 1GB hard drive (1980) weighed over 500 pounds!
6. The first-ever computer programmer was a woman: Ada Lovelace in the 1840s!
7. Python is named after Monty Python, not the snake!
8. The "Hello, World!" program was first used in a 1978 C programming book by Brian Kernighan.
9. In 2015, a developer deleted 11 lines of code, breaking thousands of apps worldwide! (It was the infamous left-pad npm package.)
10. JavaScript has nothing to do with Java—despite the similar name!
11. The @ symbol in emails was chosen by Ray Tomlinson in 1971.
12. The first-ever website is still online: info.cern.ch.
13. Wi-Fi doesn't stand for Wireless Fidelity—it has no real meaning!
14. Pac-Man was originally called "Puck-Man", but they changed it to prevent vandalism!
15. The Konami Code (Up, Up, Down, Down, Left, Right, B, A) unlocks cheats in many classic games!

Faculty Participation:

1) Dr Shaila Ghanti as a presiding officer of the IC, attended the the Orientation Programme on the Prevention of Sexual Harassment (POSH) Act 2013 organized by Goa State Commission for Women for the Presiding Officers and Members of Internal Committees (IC) of various Government departments and Colleges of South District of Goa, on 29.11.2024 from 10.00 am to 12.30pm at Ravindra Bhavan, Margao.

The session was inaugurated by Hon'ble Chief Minister Dr Pramod Sawant. Also the Chairperson of the National Commission for Women (NCW) Smt. Vijaya Kishore Rahatkar, Smt. Ranjita S. Pai, Chairperson Goa state women's commission, Ms. Eгна Cleetus, IAS South Goa collector Mrs Sunita Sawant Superintend of Police Margao, addressed the gathering.



Adv Siddhi Parodkar was the resource person for the session. The session covered the roles, responsibilities, and best practices for IC members, ensuring they are well equipped to handle cases effectively and sensitively under the POSH Act. This timely awareness initiative on POSH guidelines will contribute to fostering a supportive and respectful work environment within government institutions and will be beneficial for women employees.

2) Dr.(Mrs).Sameena Falleiro was invited to conduct the Academic Audit for the Department of Information Technology of Dhempe College of Commerce and Economics, Cujira, Bambolim,Goa on 12th November, 2024 from 9.00am onwards.



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Thank you for reading!

DEPARTMENT OF COMPUTER SCIENCE

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