

BITS & BYTES

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

About Bits & Bytes...

Hello Everyone,

Welcome to this edition of our newsletter, where we bring you the latest updates and highlights from the world of computer science and technology. In this issue, we take a closer look at the vibrant activities organized by our department, celebrate the remarkable achievements of our students, and dive into engaging articles covering trending topics in the tech landscape.

This newsletter reflects the dedication and creativity of our community, showcasing stories of innovation, success, and inspiration.

Happy Reading!



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DEPARTMENTAL ACTIVITIES

Geek Hunt 3.0

The Department of Computer Science – Firebits club organized the C- Programming and coding Competition on 19 th September 2024 at 2.30 p.m. for the students of First year Computer Science. Geek Hunt 3.0 is a Quiz competition, on C-Programming and coding. The total number of students that attended this competition was 16. The students got to test their Knowledge of C- Programming and coding.



Fresher's Party 2024



The Fresher's party was organized by the Department of Computer science as a welcome for the first year students. The student put together many performances and games for the first year students.



Talk on 'Careers in IT in Today's Era'

A talk session was organized by the Fire Bits club of the Department on the topic 'Careers in IT in Today's Era' on 19th August, 2024 as a part of the Alumni meet-up series. The resource person was Mr. Mahesh Matha, Assistant Professor, MSc in Information Technology. He enlightened the students about the various career options that we can be pursued through the IT course. A total of 35 students and 01 faculty member attended the same.



Workshop on 'Parallel Computing using OpenMP'



A workshop on 'Parallel Computing using OpenMP' was held on 22nd August, 2024. The objective of the workshop was to introduce students to high-performance computing (HPC) and parallel computing, emphasizing the use of OpenMP. The resource person was Dr. Gargi Prabhu, BITS Pilani. A total of 25 students and 8 faculty members attended the same.



ARTICLE'S

The Future of Artificial Intelligence: Shaping Tomorrow's World

Artificial Intelligence (AI) has transitioned from being a concept in science fiction to becoming a fundamental part of our daily lives. It is transforming industries, enhancing decision-making, and driving groundbreaking innovation. For computer science students, understanding AI's influence and future possibilities is crucial to staying relevant in this fast-paced field. Over time, AI has progressed from simple rule-based systems to sophisticated deep learning and neural networks. With the rise of big data and immense growth in computing power, AI models are becoming increasingly efficient, accurate, and capable. Innovations like ChatGPT, DALL-E, and self-driving cars demonstrate significant strides in natural language processing, computer vision, and robotics. The applications of AI span multiple industries, creating transformative impacts.

In healthcare, AI algorithms enhance diagnostics, assist in drug discovery, and provide personalized treatment recommendations, with tools like IBM Watson delivering exceptional accuracy. In the education sector, adaptive learning platforms utilize real-time analysis of student performance to customize learning experiences. The finance industry leverages AI to detect fraud, improve risk



management, and support informed investment decisions through advanced trading algorithms. Meanwhile, transportation is being revolutionized by autonomous vehicles that depend on AI for navigation, safety, and urban mobility solutions. Emerging trends in AI showcase the rapid advancements and opportunities in the field. Explainable AI (XAI) focuses on making AI systems more transparent and interpretable to build user trust. Ethical considerations, including tackling biases and addressing privacy concerns, are becoming increasingly important to ensure fairness and inclusivity. The development of AI for edge computing allows real-time decision-making by deploying AI on devices like smartphones and IoT gadgets, reducing delays. Furthermore, quantum AI, which combines quantum computing with AI, has the potential to solve highly complex problems in record time.

Despite its potential, AI comes with its own set of challenges, such as data privacy concerns, algorithmic bias, and ethical dilemmas. As computer science students, it is vital to prioritize creating robust, ethical, and scalable AI systems. The field offers opportunities for interdisciplinary collaboration, where AI can



intersect with domains like biology, environmental science, and sociology to create innovative solutions.

Engaging in hackathons, contributing to open-source projects, and staying updated with cutting-edge research are great ways to dive deeper into the world of AI. Enrolling in courses on AI, machine learning, and ethics will also equip students to make meaningful contributions to the field.

In summary, AI is more than just a tool—it is a powerful force that is reshaping how we interact with technology and approach real-world challenges. By recognizing its potential and addressing its limitations, we can ensure a future where AI is used responsibly and creatively for the betterment of society. As aspiring computer scientists, you have the privilege and responsibility to drive the future of AI. Let's create the innovations of tomorrow!



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"Did You Know? Fascinating Facts About Technology"

- **The First Computer Bug:** The term "bug" in computing originated in 1947 when a literal moth was found causing an issue in the Harvard Mark II computer.
- **Internet Speeds Are Faster Than Ever:** The fastest internet speed recorded is a staggering 319 terabits per second, achieved in Japan in 2021. That's enough to download 57,000 movies in a second!
- **The First Smartphone:** The IBM Simon, released in 1994, is considered the first smartphone. It featured a touchscreen and could send emails and faxes.
- **Data Explosion:** Every day, approximately 2.5 quintillion bytes of data are created—enough to fill 10 million Blu-ray discs!
- **AI in Numbers:** By 2030, artificial intelligence is expected to contribute \$15.7 trillion to the global economy.
- **Robots in Workforce:** By 2025, it's estimated that robots will handle 52% of current work tasks, significantly increasing automation in industries.
- **3D Printing Wonders:** Entire houses are now being 3D printed in under 24 hours, revolutionizing the construction industry.
- **Quantum Computing Leap:** Google's quantum computer, Sycamore, completed a calculation in 200 seconds that would take the most powerful supercomputer 10,000 years to solve.



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Student's Achievements:

1) The Science Association of Gogate Jogalekar College (Autonomous), Ratnagiri organized an online PPT competition on August 23, 2024, in celebration of 'National Space Day'. We are proud to announce that Ms. Maria Sameera Kimberly Da Costa, FY BSc. student from the Department of Computer Science, secured First Place in this prestigious event.



Faculty Participation:

1) Dr. (Mrs). Sameena Falleiro participated in an 'Academic Leadership Programme' of the Government of Goa, Directorate of Higher Education, Goa State Higher Education Council in association with the Infosys Training Center, Mangalore from 30th July to 3rd August, 2024.



Dr. (Mrs). Sameena Falleiro for the Academic Leadership Programme'

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Thank you for reading!

DEPARTMENT OF COMPUTER SCIENCE

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