

BYTES



DEPARTMENT OF COMPUTER ENGINEERING

July 2024 · ISSUE 04 · VOLUME 15

Vision of the Department

To be recognized as a Centre of Excellence in the field of Computer Engineering where learners are nurtured in scholarly environment to evolve into competent Computer Engineering professionals to benefit society

Mission of the Department

- Evolve a curriculum which emphasizes on strong engineering fundamentals with the flexibility to choose advanced courses of interest and gain exposure to tools and techniques in Computer Engineering.
- 2. Encourage a teaching-learning process in which highly competent faculty share a symbiotic association with the institutes of repute.
- Facilitate creation and dissemination of knowledge through a digitallyenabled learning environment.
- 4. Develop academic and infrastructural facilities with modern equipment and other learning resources and encourage reciprocal sharing with other institutes through networking.
- Establish a centre of excellence to enhance academia industry partnership and work on collaborative projects.

Programme Educational Objectives (PEO)

- To enable the pursuit of knowledge in the field of Computer Engineering and contribute to the profession and employability of the students.
- To engage in research, generate the employment through entrepreneurship and work effectively in multidisciplinary environment.
- To understand the human, social, ethical and environmental context of their profession and contribute positively to the needs of individuals and society at large.

DR. SACHIN BOJEWAR

HEAD OF DEPARTMENT, COMPUTER ENGINEERING

As we conclude another enriching academic year, I want to extend my heartfelt gratitude to each one of you for your dedication, hard work, and perseverance. To our graduating students, congratulations on reaching this pivotal moment. Your journey has been marked by resilience and brilliance, and I am confident that you will continue to excel in your future endeavours. Remember that you are always a part of our Computer Engineering family, and we look forward to hearing about your future successes. To our returning students, I encourage you to reflect on the knowledge and experiences gained this year and to come back with renewed energy and challenges enthusiasm. The ahead opportunities for growth and learning, and I am confident that you will rise to meet them. As we move forward, let us continue to foster a culture of innovation, collaboration, and inclusivity. Together, we can achieve greater heights and make a lasting impact on the world

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- PROF. SUJA JAYACHANDRAN

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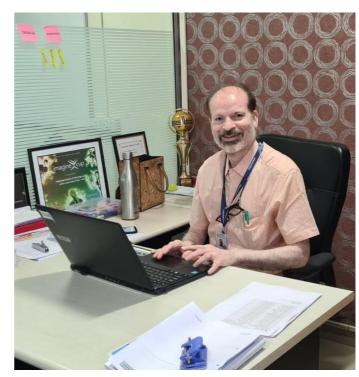
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The influence of teachers extends beyond the classroom, shaping the minds and futures of students in profound ways.

Solomon Ortiz



DEPARTMENTAL UPDATES

- · Prof. Suja Jayachandran has published a paper on "Customized Support Vector Machine for Predicting the Employability of Students pursuing Engineering" in a Scopus-indexed Journal " International Journal of Information Technology", Springer. April 2024.
- Prof. Suja Jayachandran is selected as Reviewer for Computers and Education Open Journal, Elsevier publication in June 2024
- Tanuj Ghaq, Purvesh Kanade, Hrishikesh Shinde, Karthi Devendran, Divya Surve presented paper titled "Blockchain-based Copyright Detection System: A Decentralized Approach to Protecting Intellectual Property" at IEEE International Conference on Innovations and Challenges in Emerging Technologies organized by G.H Raisoni College of Engineering on 7th and 8th June 2024.
- · Divya Surve completed Online Faculty Development Programme titled "Machine Learning Applications for Engineers" organized by the Department of Computer Science and Engineering at Chaitanya Bharathi Institute of Technology in Technical Association with ACM Hyderabad Deccan Chapter held from 3rd - 7th, June 2024.
- · Prof. Suvarna Bhat presented paper in IEEE conference ICDCECE-24 (April 24) on paediatric oral health detection using swin transformer.
- · Department conducted Departmental Advisory Board Meeting in April 2024.
- Department conducted Board of Studies Meeting in June 2024 for Autonomy & NEP Syllabus approval.

Artificial General Intelligence

Artificial General Intelligence (AGI) refers to a form of AI that possesses the ability to understand, learn, and apply knowledge across a wide range of tasks at a level comparable to human intelligence. Unlike narrow Al, which is designed for specific tasks such as language translation or image recognition, AGI aims to achieve a broader, more flexible understanding and problem-solving capability. The development of AGI involves creating systems that can reason, plan, learn, perceive, and comprehend complex concepts in diverse fields, adapting to new situations much like humans do. Achieving AGI remains a significant challenge and a major goal in the field of AI, with profound implications for technology, society, and ethics.

Department Staff

PROF. SUVARNA BHAT ASSISTANT PROFESSOR



EDUCATION QUALIFICATION:

Pursuing PhD

WORKING EXPERIENCE: 15 YEARS

AREA OF SPECIALIZATION:

Image Processing Machine Vision Digital Circuits Microprocessors

EDUCATION QUALIFICATION: Pursuing PhD

> WORKING EXPERIENCE: 13 YEARS

AREA OF SPECIALIZATION:

Web Development Databases Natural Language Processing



PROF.SUJA JAYACHANDRAN

ASSISTANT PROFESSOR

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A good student is not one who excels only in academics, but one who exhibits curiosity, perseverance, and a willingness to learn from both successes and failures.

- John Dewey



Student's Speak

Deep Salunkhe

Looking back on these three years at the institute, I'm amazed at how much I've changed. I arrived as a shy, uncertain freshman, but now I feel like a completely different person. The friendships I've made and the mentorship from our faculty have been transformative.

One memory that really stands out is from Professor Vanwari's class in 5th semester. He went off-script, showing us how all our subjects interconnect in the real world of computer engineering. It was one of those rare "aha" moments that gave me goosebumps and rekindled my passion for this field.



Deep SalunkheTE-A

I've really appreciated our department's focus on practical knowledge. Whether it's diving into research papers or tackling mini-projects, we've had countless opportunities to apply what we've learned. It's made everything feel more relevant and exciting.

Getting involved with IEEE and Unstops early on was a game-changer for me. As someone living away from home, these committees became my lifeline. They pushed me out of my comfort zone, helping me make friends across departments and boosting my confidence. The thrill of winning a few competitions along the way was an unexpected bonus!

Living in the hostel has had its challenges, but the support network I've built here is incredible. My friends and mentors have become like a second family, making this journey so much more than just about academics.

Now, as I face my final year, I'm a mix of emotions - excited for what's next, but also a bit nostalgic. These four years have shaped me in ways I never expected. I'm so grateful for every experience, every lesson, and every person who's been part of this journey. Whatever comes next, I know I'm ready for it, thanks to my time here.

Tantravihar: Project Competition Winners



BE Students Suyog H., Aditi D., Pankaj B, Shivam S. under the guidance of Prof. Amit K. Nerurkar secured 2nd place in the project competition Tantravihar in April 2024 for the project Real time Advance intelligent video surveillance system for crime detection.

TE students Sakshi S., Anuj R., Sharayu S., Gayatri V., Ayush D. under the guidance of Prof. Amit K. Nerurkar secured 1st place in the project competition Tantravihar in April 2024 for the project Cryptic Cipher Simulator.

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Alumni are the living proof of an institution's legacy, embodying the values and education imparted to them and spreading the institution's influence far and wide.





Know an Alumnus: Saumya Singh

My Journey Through College: A Tale of Growth, Challenges, and Memories

Embarking on my college journey was like jumping on a high-speed train straight out of high school. The whirlwind of assignment deadlines, fast-paced classes, and the daily grind of commuting became the new normal in my first year. As we braced ourselves to dive into the Computer Engineering department in our second year, we had no idea the lasting lessons this adventure would impart. Second year was a whirlwind of excitement and new opportunities. The academic demands ramped up, but our department countered with a buffet of activities—technical clubs, hackathons, workshops, seminars, and guest lectures. Balancing academics with these events was a juggling act, but it was worth every moment. Our professors were our biggest cheerleaders, urging us to participate and grow into versatile, well-rounded individuals.



Saumya Singh

In-person classes were a rush—literally! Racing to the 9 AM lecture, making sure we weren't late to Rugved Sir's class to avoid the dreaded wait outside, was a daily escapade. Ravindra Sangle Sir's classes were a mix of laughter and learning, and planning a mass bunk, only to get scolded as the Class Representative, added to the thrill. Swapnil Sir's intricate explanations made even the toughest subjects understandable, and Rasika Ransing Ma'am turned the fear of Operating Systems into fascination. Lab sessions were particularly special. They offered one-on-one interactions with professors, providing personalized guidance that made all the difference. These sessions fostered lasting bonds, and even now, as a professional, I stay connected with my professors, sharing my achievements and seeking their wisdom.

Then came COVID-19, turning our in-person joy into virtual learning. The transition was bumpy, but thanks to professors like Amit Nerurkar Sir, it soon became seamless. His dedication ensured our online classes were just as engaging. Divya Surve Ma'am, my mentor for the final year project, was a beacon of support, guiding us from idea inception to successful implementation.

Throughout these years, I participated in various competitions, served as the Literary Secretary in the Student Council 2020-2021, and led as the Curator for TEDx 2021. Internships sharpened my technical skills, preparing me for the professional world. Guest lectures from alumni who had become leaders in tech giants and startups were incredibly inspiring.

My four years at VIT were transformative. Every corner of the college holds countless memories. I extend my heartfelt gratitude to the Computer Engineering Department at VIT. As I look back, I can't help but wish for a time machine to relive those precious moments.

-Saumya Singh CMPN 2018-2022

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Excellence is not a skill. It is an attitude.

— Ralph Marston



CESA Flagship PLETHORA Seminar on 5 Minute Engineering

1st April, 2024



The "5 Minute Engineering" event, organized by the CESA, featured Mr. Shridhar Mankar, a renowned YouTuber known for his "5 Minute Engineering" channel and an Educational Blogger with over 570k subscribers. The event aimed to provide captivating motivational insights and insider strategies for aspiring engineers, culminating in an interactive Q&A session. Mr. Mankar commenced the event by inviting students to participate actively in an open discussion. Attendees eagerly seized the opportunity, posing thought-provoking questions on various topics ranging from Mr. Mankar's personal journey from a normal engineering student to becoming a YouTuber.

Poster Palooza

2nd April 2024

The venue buzzed with energy as participants immersed themselves in their designs, incorporating elements of technology and entertainment to bring their visions to life The event drew to a close, the venue was adorned with an array of visually stunning posters, serving as a testament to the boundless creativity that flourishes within the intersection of technology and entertainment.



Upside Down Quest

2nd April 2024



Participating in events like Upside Down Quest fosters creativity, teamwork, networking, problem-solving, and communication skills among students. Through engaging challenges and collaborative tasks, students will learn to think innovatively, work effectively in teams, build professional connections, tackle complex problems, and communicate efficiently. These experiences will enrich their educational journey and equip them with valuable skills essential for future career success.

Mini Marvel Showcase

4th April 2024

The Mini Marvel Showcase event was a success, offering a platform for students to display their talents. It facilitated meaningful interactions between participants, judges, professors, and visitors, fostering a culture of learning and collaboration.



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Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.

- Albert Schweitzer

CSI Flagship ENTHUSIA **CSI Event: Operational Nightfall**

18th & 19th April 2024

Operation Nightfall consisted of two exciting days filled with challenges and teamwork. On the first day, teams engaged in problem-solving activities, solving puzzles to navigate between classrooms and gather clues. They worked together to find hidden objects, demonstrating strategic thinking and cooperation. Their successful efforts were recognized by the event organizers. The second day focused on a mock murder mystery. Teams received logical clues and investigated a realistic crime scene to identify the culprit. After thorough analysis and collaboration, they presented their conclusions.



CSI Flagship Enthusia: Sinister Scripts

23rd-24th April 2024



The CSI-VIT Chapter 2023-24 hosted the "Sinister Scripts" event, a competitive coding competition as part of their flagship event, "Enthusia," featuring a prize pool of 14,000 INR. On Day 1, participants faced a competitive programming round on HackerRank, where they had to solve five questions. The challenge link was encrypted with a special scheme, and participants received a program to encrypt strings similarly. They needed to reverse-engineer the encryption to access the challenge. The top seven teams that solved all challenges advanced to Day 2. On Day 2, participants used a modified version of Python with altered keywords and a reversed execution order. They first wrote star pattern programs and then implemented a TicTacToe game from scratch.

CSI & CESA Event: Artificial Intelligence Made Me Rich

25th -26th April 2024

The event spanned two days and focused on generating and presenting business ideas. On Day 1, held on April 25th, teams were given a scientific domain through random chits and had 2 minutes to use an Al tool to generate a business idea, followed by 5 minutes to prepare their presentation. Three panels of judges evaluated their ideas. On Day 2, the finalists created detailed presentations to pitch their ideas to a single panel of judges. The judges selected three winners based creativity, research, domain knowledge, adaptability.



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Flutter enables developers to create beautiful, high-performance applications for multiple platforms from a single codebase.

— Tim Sneath



Student Article: Flutter - Unifying Code And Platforms

Too tired of being limited by frameworks to develop apps for various platforms? Wish that you could crank out apps that would work on all devices with a single codebase just like websites? This is what Flutter offers you, a solution to all above and various other problems in the field of App development under one framework.

Flutter is an open-source UI framework toolkit developed by Google. The major differentiating factor for Flutter among all App Development frameworks is its "write once, use everywhere" policy for code where we can create natively compiled applications for android, iOS and web apps with a single codebase.

Flutter's UI toolkit, to put in simple words, is beyond awesome!! The UI toolkit offers the ease of developing outstanding and attractive front-end without much hassle just by setting some properties. Another benefit of using flutter is the 'hot-reload' feature where we can see changes in the app in real time when we make changes to code without much hassle.



Rohit Bhandwalkar TE-A

This not only slashes down the development time, it also increases productivity and efficiency of developers. The hot reload feature basically allows us to view and implement changes in the app without having to rebuild the entire app again.

So, we, being technical people, the obvious question is how does Flutter pull off support for multiple platforms at once? Flutter uses a 'embedder' that does all the cross-platform magic under the hood, which allows Flutter apps to run on any OS. When you write Flutter code in Dart, it gets compiled into native machine code for the target platform. Flutter uses a just-in-time (JIT) compiler during development, which enables features like hot reload. For production builds, Flutter uses Ahead-of-Time (AOT) compilation to generate optimized native code ahead of time, resulting in faster startup times and better performance.

Being men and women of science, I think we know nothing is perfect, so what's the catch when it comes to Flutter? The Dart programming language used in Flutter is not yet able to complete with technologies used in native development like java, kotlin, etc. Another development drawback is the large weight of apps, which can be an issue and lead developers to choose something lighter.

What is the future of Flutter then? Flutter is relatively new and coming years will unfold capabilities of this Google framework. However, considering its current trajectory, we can see some promising breakthroughs in the world of app development thanks to Flutter.

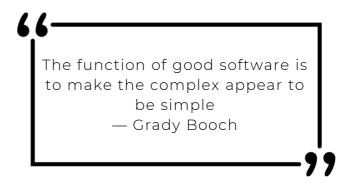
Rohit Bhandwalkar

TE-A

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UPCOMING EVENTS

- CSI WILL HOST ITS FLAGSHIP EVENT CYBERFRAT IN AUGUST 2024
- CESA WILL HOST WOKRSHOP ON BLOCKCHAIN IN AUGUST 2024
- DEPARTMENT WILL HOST ORIENTATION PROGRAM FOR NEW SEMESTER IN JULY 2024
- TEDxVIT WILL BE HOSTED IN JANUARY 2025.



EDITORIAL TEAM

PROF. AMIT K. NERURKAR
Chief Editor

