



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

1. 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.
3. Facilitate creation and dissemination of knowledge through a digitally-enabled learning environment.
4. Develop academic and infrastructural facilities with modern equipment and other learning resources and encourage reciprocal sharing with other institutes through networking.
5. Establish a centre of excellence to enhance academia – industry partnership and work on collaborative projects.

Programme Educational Objectives (PEO)

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

PROF. DR. SACHIN BOJEWAR

HEAD OF DEPARTMENT, COMPUTER ENGINEERING

As we commence a new semester in the realm of computer engineering, I wish to offer a heartfelt welcome to each one of you. We are delighted to have you as integral members of our department, and I am filled with enthusiasm for the educational and exploratory voyage that awaits us. During this semester, you will be presented with the opportunity to explore a diverse array of subjects, spanning from digital systems and computer architecture to the realm of software development and artificial intelligence. Additionally, you will be able to participate in stimulating projects, engage in collaborative endeavors with your fellow students, and acquire practical, hands-on experience that will equip you for the real-world challenges that lie ahead. As the Head of the Department, I am confident that you have the potential to achieve great things in the field of computer engineering. Your dedication and hard work will be the keys to your success.

WHAT'S INSIDE

CSI & CESA Event: Cyberfrat

Departmental Updates

Department Staff

- PROF. SANJEEV DWIVEDI
- PROF. AMIT AYLANI

Student Talk: Shrawani D.

GDSC Event: Competitive Coding

Alumnus Talk: Adityavikram T.
Alumni Achievement

Students' Achievements

Publications

FDP on IOT

CSI Event: FE 101

CESA Event: Generative AI

Student Article: Mrunal T.





Quantum Encryption is essential to protect our digital assets and infrastructure from attackers.

— Kevin Coleman



CSI & CESA Event: Workshop on Cyber Security Awareness Program & Internship opportunities

DATE: 9th September 2023

CSI & CESA in collaboration with Cyberfrat had organized its first event of this tenure “Workshop on Cyber Security Awareness Program & Internship opportunities”. Gaurav Batra Sir emphasized the importance of email security, employing solutions to combat malware and phishing threats, and the implementation of email authentication protocols for spoofed email detection. Expanding the scope of a Cyber Security Awareness Program to incorporate internship opportunities entails offering a well-rounded learning experience that combines theoretical knowledge with practical exposure. This approach involves structuring the workshop's curriculum to cover various facts of cybersecurity, inviting industry experts to share insights, facilitating networking sessions, and organizing internship fairs. Ultimately, this integrated initiative not only empowers participants with the skills and qualifications needed for cybersecurity careers but also facilitates their transition into the workforce, benefiting both aspiring cybersecurity professionals and organizations seeking skilled talent.



Departmental Updates

1. CSI-VIT Conducted workshop CS-101 in September 2023.
2. CSI-VIT & CodeGym in collaboration with HACK2SKILLS conducted bootcamp for google hackathon in September 2023.
3. GDSC Orientation was planned to make the students aware about Google Developer Student Clubs and the various opportunities and learning resources provided by Google & Google for Developers in August 2023.
4. CESA-VIT conducted Workshop on Application building in NLP & ML Domain in September 2023.

Department Staff

PROF. SANJEEV DWIVEDI
ASSISTANT PROFESSOR



EDUCATION QUALIFICATION:
PURSUING PhD

WORKING EXPERIENCE:
17 YEARS

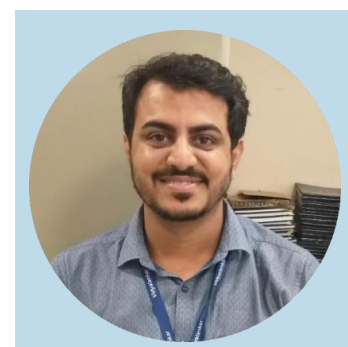
AREA OF SPECIALIZATION:
MACHINE LEARNING
ALGORITHMS
PROGRAMMING
COMPILERS

EDUCATION QUALIFICATION:
PURSUING PhD

WORKING EXPERIENCE:
9 YEARS

AREA OF SPECIALIZATION:
WEB DEVELOPMENT
DATA SCIENCE
NETWORKS
HUMAN MACHINE INTERACTION

PROF. AMIT AYLANI
ASSISTANT PROFESSOR



“ Strive for perfection in everything you do. Take the best that exists and make it better. When it does not exist, design it. ”
 - Sir Henry Royce

Student's Speak

Shrawani Dhomne

As I stand on the cusp of completing my final year in the Computer Engineering department at VIT Mumbai, I cannot help but reflect on the incredible journey I've had, and the individuals who have played a pivotal role in shaping my academic and personal growth.

With immense gratitude that I take this opportunity to express my heartfelt gratitude to our esteemed professors, management and others who provide students with so many resources and opportunities to grow. Academically and expand our technical knowledge by organizing events through committees like CSI, GDSC CESA and ensure a holistic learning experience. it is a nurturing ground for aspiring engineers, a hub of innovation. As a student of computer engineering, I've always been immersed in the world of software and constantly learning about new technologies.



Shrawani Dhomne
BE - B

This exposure has helped me to discover my deep interest in data analysis and data science domain. I'm overwhelmed with appreciation when I think back on this life-changing academic experience for the knowledge shared and the avenues made available. My passion for technology has only deepened, and I eagerly anticipate the journey that lies ahead, fueled by the knowledge and skills gained during my time at VIT Mumbai. Morally, socially, and academically this college has enhanced the life of each one of us. Our goals and ambitions have gained clarity through the invaluable direction and mentorship provided by our venerated faculty and peers.

GDSC Event: Roadmap to Competitive Coding

On September 14, 2023, Google Developers Student Club (GDSC) VIT organized an event titled "Roadmap to Competitive Coding", the event featured Jwala Chourasiya, a distinguished educator at Codechef, as the guest speaker.

The speaker then underscored the contemporary significance of competitive coding within the tech industry. He explained how competitive coding skills are highly valued by employers. He also shared some examples of how competitive coding skills are used in the real world. The speaker then provided a comprehensive overview of the Codechef platform. He explained the different features of the platform and how to use it for competitive coding. He also shared some tips for getting started on Codechef. In conclusion, the event was a resounding success, providing attendees with a wealth of knowledge, the speaker with a rewarding experience, and the GDSC VIT community brimming with happiness. "Roadmap to Competitive Coding" not only illuminated the path to success in competitive coding but also strengthened the sense of camaraderie and learning within the GDSC VIT community.



I have not failed but found 1000 ways to not make a light bulb.
- Thomas Edison



Know an Alumnus **Aditya Vikram Thampi**

The years spent at VIT were rather formative, realized more now in hindsight than back in the day!

Coming to the Department of Computer Engineering, it is indeed my alma mater within VIT.

I cherish the diverse personalities that impressed upon us their subject-matter expertise, sensibilities, temperament, and, not to forget, life wisdom!

We had seasoned and veteran faculties of the likes of Prof. Pankaj Vanwari. Some possess a quirky style of teaching, like Prof. Ravindra Sangle. The high-spirited Prof. Amit Nerurkar. The notoriously strict Prof. Rugved Deolekar, popularly known as "RVD sir". Prof. Sanjeev Dwivedi always struck a chord and remains a well-wishing figure.

In a top-tier city like Mumbai, where real estate is very dear, VIT's generously spaced campus is as good as it can get. It sets a conducive atmosphere for a balanced college life, filled with academics, fests, sports, project competitions, and whatnot!

The Department of Computer Engineering duly complements this with its gifted faculty and contemporary technology infrastructure, attracting the best of minds as its students. The department has risen from strength to strength and gathered momentum over the years to take the college to unscaled heights.

I had an aptitude for computer programming right from my junior college days, and being part of the Department of Computer Engineering at VIT only augmented my competency. During my final year, I made it to the coveted cohort of Economic Times Campus Stars 2.0, Class of 2018-19, dubbed as India's largest hunt for the brightest engineering minds.

In conclusion, I came out of VIT as a more competent and well-rounded person capable of evolving as a professional in industry and academia in the times to come. With this, I congratulate you for being part of such an esteemed institute and exhort you to take full advantage of the resources at your disposal at VIT and emerge victorious in your endeavors.



Aditya Vikram Thampi

Alumni Achievement

Rinkesh P. (Batch of 2020) has been selected as Scientist at Defense Research and Development Organization and as Trainee Scientific Officer at Bhabha Atomic Research Centre, two of India's premier research organizations



I have not failed, but found 1000 ways to not make a light bulb.

- Thomas Edison



Student's Achievements Smart India Hackathon SIH Kavach 2023



It gives me immense pleasure to announce that this year again Vidyalankar Institute of Technology with an outstanding performance has won first prize in Smart India Hackathon SIH Kavach 2023 competition held at Bhopal, India from 8th to 10th August 2023. We are extremely happy to say that VIT has won SIH for the four consecutive years and marked its place into Hackathons KAVACH 2023 had a total of 20 problem statements in which more than 1400 institutes had participated Vidyalankar bagging the first prize in the competition stands in top 20 institutes of the country.

Aadit Chavan, Adwait Godbole, Amit Sharma, Yash Malode, Abhishek Jadhav, Priyal Dupare (BE CMPN)

NABARD Hackathon

We are very happy and overwhelmed to inform you that our students have once again made us proud by winning the National Agrifunds Hackathon (NABARD Hackathon) competition in September 2023 and won a prize of 1 Lakh. Suyog Havare, Vibodh Bhosure, Harsh Naik, Ashuraj Herode (BE CMPN)



Ideastrom



Happy to share our SE CMPN Sai Moon's along with our Alumni Sahil Malthankar startup is selected as finalist in- IIT Roorkee Production and Ideastrom- IITB - Finalist E- summit under the guidance of Dr. Sachin Bojewar.



Authored book: CMD 101-Commanding the Console & High GRE score

Trisha Shah from BE CMPN Authored and published book on CMD 101-Commanding the Console, CMD 101 is your one-stop resource for mastering the Command Prompt, written by Aditya Singh and Trisha Shah. This 130-page guide is filled with practical, real-world examples that will take you from beginner to power user, unlocking your computer's full potential. Also, Trisha scored 334 in her GRE. All the best Trisha !!!



Runner's up at Interzone badminton championship



Playing this event made me realize how important it is for an individual to play in a team. Team tournaments help me as a captain to realize how to deal with your team members against different teams. How to manage your team members in different scenarios and how to keep calm in the most difficult scenarios. Team tournaments are very helpful to understand the importance of team spirit, patience, coordination.

Shivani Herlekar (BE CMPN)



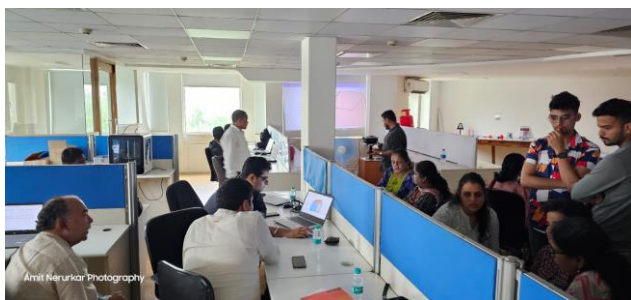
A good scientist is a person with original ideas. A good engineer is a person who makes a design that works with as few ideas as possible.
There are no prima donnas in engineering.
- Freeman Dyson



Publications

1. Prof. Swapnil Sonwane presented paper “Blockchain-Powered FinTech: Shaping the Future of Indian Industries” in IEEE ICBDS 2023 organized by IIIT Raipur.
2. Mugdha Sawalapurkar, Shweta Ghadshi, Manjiri Naik, Ruhi Ambone, Prof. Amit Nerurkar presented paper Simulation of various Sensors and Actuators in IoT Embedded Environment for Home Automation using TinkerCAD in ICDSAIA-2023 organized by Taylor’s University Malaysia.
3. Prof. Amit Nerurkar, Shivani Herlekar, Shreya Pednekar presented paper Analysing Implications of ESG Metrics for Sustainability & Efficiency in Indian Automotive Manufacturing using Disruptive Technologies in ICDSAIA-2023 organized by Taylor’s University Malaysia.
4. Rugved Tatkare, Gaurang Kalyankar, Shrawani Dhomne, Vaibhavi Raje, Prof. Amit K. Nerurkar presented paper EmotiSense: A Mood-based API System Utilizing Physiological Parameters for Emotional Analysis in ICDSAIA-2023 organized by Taylor’s University Malaysia.

FDP on IOT Applied Learning with GROK Learning



Department of Computer Engineering organized 1-week Short-Term Training Program (STTP) on IOT-Applied Learning in Association with Grok Learning from June 26, 2023, to July 01, 2023. The event was organized in the campus of Grok Learning, where the experts demonstrated various IOT based projects & gave training on block programming for developing various application.

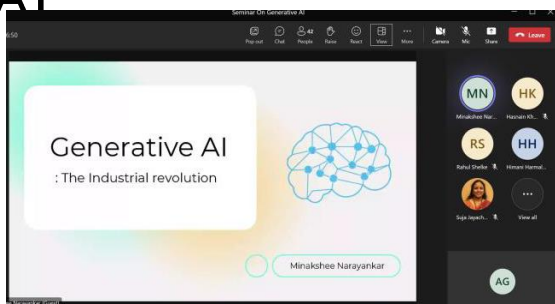
FDP was attended by Dr. Sachin Bojewar, Prof. Amit K. Nerurkar, Prof. Sanjeev Dwivedi and Prof. Swapnil Sonawane.

CSI Event: FE 101- Introduction to Technical Aspects

The event's goal was to enlighten first-year engineering students on various domains. Each speaker was allotted a timeframe of 30 minutes for their respective domains as this event was of 2-hours on September 13, 2023.



CESA Event: Seminar on Generative AI



Our speaker for this event was Minakshree Narayankar Ma'am (AI – Web developer at TCS Digital TCS Research and Innovation). She started the Seminar by establishing the fundamental connections between AI, ML, DL, and LLMs on September 22, 2023.



Engineering is the art of directing the great sources of power in nature for the use and convenience of man.

- Thomas Tredgold



Student Article: GANs: The Key to Generating Realistic Content by Mrunal Tamhane

Have you ever been amazed by the realistic images and videos that machines can generate? This is where Generative Adversarial Networks (GANs) come into play. It was developed and introduced by Ian J. Goodfellow in 2014. GANs are a fascinating field of study that has seen a lot of development in recent years. They have been used to create realistic images, videos, and even music. Generative Adversarial Networks (GANs) are a type of deep learning architecture that consists of two neural networks competing against each other in a zero-sum game framework. The goal of GANs is to generate new, synthetic data that resembles some known data distribution. Generative adversarial network (GAN) has two parts:

- The generator learns to generate plausible data. The generated instances become negative training examples for the discriminator.
- The discriminator learns to distinguish the generator's fake data from real data. The discriminator penalizes the generator for producing implausible results.



Mrunal Tamhane
BE-A



The generator produces fake data, and the discriminator quickly learns to tell that it's fake

The Discriminator in a GAN is simply a classifier. It tries to distinguish real data from the data created by the generator. It could use any network architecture appropriate to the type of data it's classifying. The discriminator's training data comes from two sources:

Real data instances, such as real pictures of people. The discriminator uses these instances as positive examples during training.

Fake data instances created by the generator.

The discriminator uses these instances as negative examples during training. The Generator in a GAN learns to generate fake data based on feedback from the discriminator, aiming to make the data generated by it be classified as real.

In conclusion, Generative Adversarial Networks (GANs) represent a transformative leap in AI, enabling the creation of remarkably realistic content. Yet, challenges persist, including training instability and resource demands. As GANs progress, addressing these issues will be crucial for ensuring transparency and fairness in their deployment. With continued research, GANs are poised to revolutionize synthetic content generation

UPCOMING EVENTS

- TEDxVIT WILL BE ORGANIZED IN JANUARY 2024
- CSI WILL HOST ITS FLAGSHIP EVENT CYBERFRAT IN OCTOBER 2023
- CESA WILL HOST ITS FLAGSHIP EVENT TOYTHON IN OCTOBER 2023
- GDSC VIT WILL BE CONDUCTING A CITY-WIDE SUMMIT THEMED AROUND GENERATIVE AI IN OCTOBER 2023.

“A good engineer thinks in reverse and asks himself about the stylistic consequences of the components and systems he proposes.
- Helmut Jahn”

THE
EDITORIAL TEAM

PROF. AMIT K. NERURKAR
Chief Editor