BYTES

DEPARTMENT OF COMPUTER ENGINEERING

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.

WHAT'S INSIDE

PROF. DR. SACHIN BOJEWAR

HEAD OF DEPARTMENT, COMPUTER ENGINEERING

Our department has been at the forefront of technological innovation, and I am proud to be a part of this dynamic and exciting field.

As we look to the future, I want to encourage everyone to remain focused on our objectives and to continue pushing the boundaries of what is possible. The field of computer engineering is constantly evolving, and we must remain adaptable and innovative in order to stay ahead of the curve.

I am excited to see what the future holds for our department, and I look forward to working with each one of you to achieve our goals and to make a positive impact on society.

"

Website without visitors is like a ship lost in the horizon
*— Dr. Christopher Dayagdag*

"

CESA Event: Workshop on website building and React js

DATE:23rd January 2023 and 24th January 2023

DAY 1: Sanyog Jain started the session explaining the concepts of basic HTML. Further he continued the session with explaining the concepts of CSS and, we started to create a link tree with the help of html and CSS.

DAY 2: Kalpak Tole Sir was our speaker on this day. Here, Sir gave us an idea about Front-end Development. He showed us some of his projects. Further, he helped us understand the basic commands to get started with react.

For any company or business, a website matters the more than anything, when it comes to reaching out to consumers online. A website is a picture of the company online. These days, every industry realizes the necessity for maintaining a website and are setting in steps to create and design the best website for taking their products or services online.
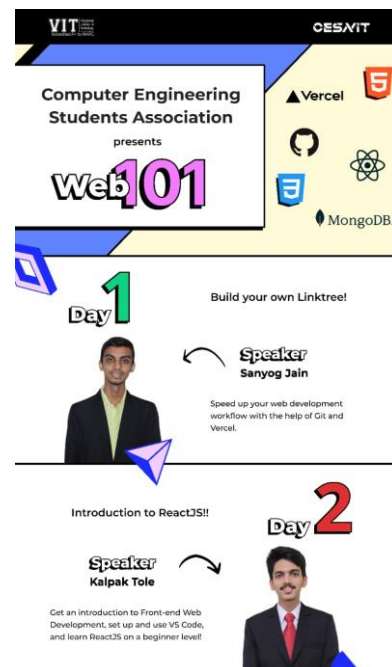
CONGRATULATIONS

Shivani Herlekar from TE CMPN B
Winner of Women's Team Championship at Maharashtra State Olympic Games-Jan 2023
Bronze Medallist in the individual event at Maharashtra State Olympic Games-Jan 2023
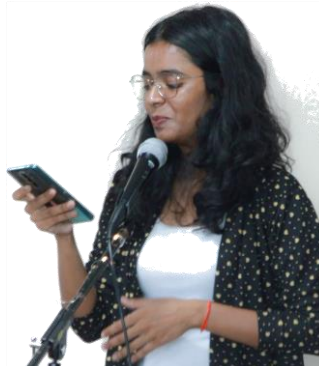
Pallavi Borse from TE CMPN –B won Open mic competition on 27/3/23 at VIT

Department Staff

PROF. KAVITA SHIRSAT
ASSISTANT PROFESSOR

EDUCATION QUALIFICATION:
PURSUING PhD

WORKING EXPERIENCE:
25 YEARS

AREA OF SPECIALIZATION:
WEB DESIGN
DEEP LEARNING
DATA SCIENCE

PROF. SANJEEV DWIVEDI
ASSISTANT PROFESSOR

EDUCATION QUALIFICATION:
PURSUING PhD

WORKING EXPERIENCE:
16 YEARS

AREA OF SPECIALIZATION:
ALGORITHMS,
PROGRAMMING,
MACHINE LEARNING

"

Education is the passport to the future, for tomorrow
belongs to those who prepare for it today
—Malcolm X

"

Student's Speak

Krunal Badgujar

Make a difference and stand out!!!!

Being a student of VIT and specially from Computer Department is been a great experience for me. Staring from attempting my first interview for Class Representative position to getting selected there to getting into a technical chapter CSI as an Events Head and being chosen as a Student Council Branding and Publicity secretary the journey was filled with joy, excitement and experience. VIT is recently been declared as autonomous institute which gave us an upper edge in our holistic development. We have been given a choice to opt for a minor subject which gave me a confidence to standout or compete with other students from all over world.

Krunal Badgujar TE-B

Last year my team got selected for Smart India Hackathon Grand Finale under the guidance of Prof.Sachin Deshpande and Prof. Sanjeev Dwivedi. I have done several projects under Prof. Sachin Deshpande through him I got many chances to prove myself and got a great exposure through that work. I would especially like to thank Prof. Amit Nerurkar for always guiding me throughout these 3 years. All the Professors are really helping, supportive and experienced this makes a difference.

Speaking about my experience being class representative, I have learned many things, inculcated many good habits, implemented some routines. Polished some skills like punctuality, discipline, liveliness, convincing power and last but not the least staying attentive. It is not at all hectic as it is part of my daily routine now. I would say it gives you an upper hand in handling several things at a same time. You interact with several people daily and here you are indirectly working on your soft skills. Basically, everyday you will be facing a new situation and you need to tackle it in a smart way.

I would like to conclude by saying Be sure with Vidyalankar is not just a tagline but also a commitment which is getting fulfilled everyday. My experience at VIT is amazing and exciting as I am learning new things daily and working on my skills at the same time.

CSI Event: TECHBIDS

DATE:17th March 2023

An Event TechBids(A Technical Auction) was conducted for the students of Vidyalankar Institute of Technology in accordance with CSI VIT.

The 1st round (10 minutes timeline) was a quiz round conducted on Quizizz website.

The 2nd round (40 minute timeline), auction round, in which bidding started for 3 problem statements. Powerups like time extension, professional opinion were bided too.

The 3rd round(40 minute timeline) started. 3 leading teams of 2nd round who won the bid got a 30 minute advantage in the 3rd round.

> The future belongs to those who believe in the beauty of their dreams.
> - Eleanor Roosevelt

Know an Alumnus Trishala Patil

Greetings to everybody! While it's been years since I graduated from college, I simply wanted to take a moment to cherish and reflect on my days as a CS student at VIT.

Firstly, I must say that I absolutely loved my time at college. The four years were perfect, packed with challenging coursework, lasting friendships, and some truly unforgettable experiences. College is an amazing time to explore your interests and discover what you're truly passionate about. The coursework was rigorous and challenging, but it was also incredibly rewarding. The professors were all experts in their field, and they did an excellent job of making the material accessible and engaging. We were encouraged to work collaboratively on projects, which helped us develop our teamwork and communication skills, we got opportunities to apply what we were learning in the classroom to real-world problems.
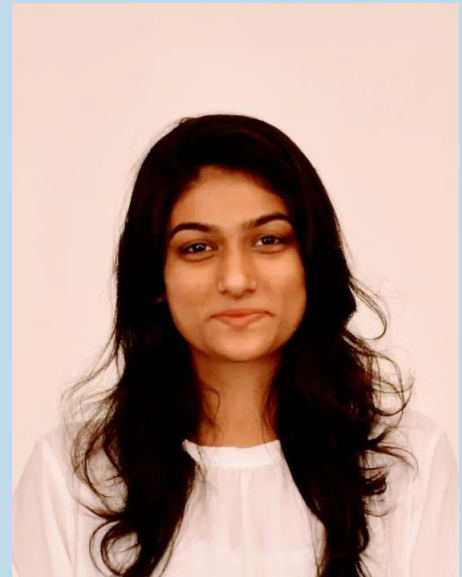
Trishala Patil

Another thing that I loved about the Computer Engg. at VIT was the sense of community. The faculty, staff, and students all had a genuine passion for the field, and it was inspiring to be around so many like-minded people. We had a variety of clubs and organizations dedicated to computer science and related topics, which provided a different exposure in multiple aspects outside of the classroom. I made some of my closest friends through these organizations and with all the corporate hustles we are still closely connected. Of course, college wasn't always easy. Many times, I felt overwhelmed by the coursework, or when I doubted myself. But those moments were outweighed by the times when I felt a sense of accomplishment, like when I finally figured out a difficult problem, or when I successfully completed a major project. I was lucky to have the support of our finest teachers and never felt the hesitation of discussing an issue with my professors never failed to give personal attention to every student. They not only helped me cope with my studies but also helped me recognize my strengths. They not only focused on good grades but also on overall development to make us corporate ready through productive seminars for students with different interests. They always made sure that we were knowledgeable about trending technologies and ensured every student got a chance to participate. Also, I got an opportunity to work for the TEDxVIT committee which has a great impact on my overall personality.

Now that I'm out in the "real world," I can say with confidence that the education that I received at VIT was top-notch. I feel well-prepared for my career, and I've been able to apply many of the skills and concepts that I learned in college to my job. But beyond that, my college experience gave me so much more than just technical knowledge. It taught me how to think critically, how to work effectively in a team, and how to communicate my ideas clearly and persuasively. I will always be thankful to the Computer Dept. for giving me opportunities to showcase my talent and enhance them.

> " 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 Event: Computer Vision

DATE:18th February 2023

CSI-VIT hosted an online event on Computer Vision.

Ms Sarah shared her personal experience with her work. She also advised students on CV and applications. Concepts like Machine Learning (which includes Deep Learning and Natural Language Processing)was explained with pointers. Human Vision (which include eye, visual cortex, receptors) was explained and was differentiated with Computer Vision. She explained how AI enables computers to think and how computer vision enables the computer to see, observe and understand. She practically explained the image modification by doing changes to memes on Jupyter notebook.

The main contents for computer vision covered were :

- Introduction – Technologies used
- Computer Vision
- Application
- Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing

Departmental Update

1. Department has started giving teaching and research assistantship to students from January 2023.
2. Dr. Sachin Bojewar and Prof. Amit K. Nerurkar visited CyberFrat, Mumbai office for discussion of Cybersecurity awareness program..
3. Prof. Amit K. Nerurkar presented paper in International conference and published paper in Scopus Journal
4. Prof. Swapnil Sonawane presented paper in International conference and published paper in Scopus Journal
5. BE CMPN student Neeraj Salunke, Swapnil Sonawane, Dilip Motwani presented paper in International Conference in March 2023.
6. TE CMPN students Vaishanavi Patil, Tanay Jawale, Vaibhavi Kadam, Atharva Dhadke, Amit K. Nerurkar presented paper in International conference in March 2023.

Dr. Mandar Sohani

Congratulations Prof. Mandar Sohani on completion of his PhD in March 2023 from University of Mumbai

BEST PAPER AWARD

Delighted to share that our students of Third year Suyog Havare, Yash Jagdale, Renuka Patwari and Vibodh Bhosure and the mentor Prof. Divya Surve had participated at a conference named AICDMB organized by Vidyavardhaka College of Engineering, Mysuru which was held in March 2023. They bagged Best Paper Award for their research paper. Their paper is extended to be published in the Journal of Taylor and Francis.

> Take the attitude of a student, never be too big to ask questions,
> never know too much to learn something new.
> —Og Mandino

CESA Flagship: PLETHORA

DATE:13th March 2023 to 17th December 2023

Charm Your Code was a coding competition hosted on Hackerrank, managed by the "Technical Team" of CESA ,which aimed to test the coding skills of participants in the programming language of their choice. The hosts for this event were Ayush Pradhan and Sharyu Sonavane. The competition consisted of several problems with different levels of difficulty, and participants had to solve as many problems as possible within a given time limit. The participants were given 90 mins to solve the problems

Tizzy Code event was based on the frontend website coding competition, which consisted of replicating the given website in which the prerequisites required were HTML and CSS. The judge for this competition was Mr. Kalpak Tole. The students from various branches and batches participated in the event. All these students were extremely competitive as there was a time limit of 45min only.

Mr. Kalpak reviewed all those submissions submitted by the students and marked them as per the accuracy of the design given to the students on the screen.

Tizzy Code was based on the fun coding contest named LOLCODE. LOLCODE is a fun way to learn programming concepts and create small projects for entertainment purposes. It is designed to be humorous and entertaining, using syntax that resembles Internet memes and text message slang.
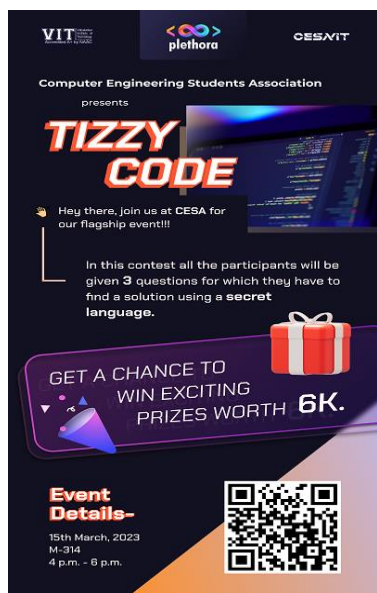
Thrilling treasure hunt event called **Ace the Hustle** which was the last event of Plethora. The event attracted many enthusiastic participants. There were altogether 13 teams who were eager to put their problem-solving and critical-thinking skills to the test.
The treasure hunt event was designed to challenge participants to solve a series of clues and puzzles that led to the ultimate treasure.

" Education is the key to success in life, and teachers make a lasting impact in the lives of their students.
—Solomon Ortiz "

Student Article: Artificially Creative : A look at AI-generated art

With the increasing advancement in artificial intelligence, the world of art is experiencing a major transformation. From making picturesque landscapes to drawing breath taking portraits, these algorithms have been used to create stunning pieces that challenge our perception of creativity. There are multiple options available today for generating AI art like Midjourney, Dall-E, Stable Diffusion, etc. Besides is an AI-generated art made using Dall-E with the prompt "gateway of India at night with a spaceship in the sky, digital art". But how do these algorithms work, and what are the ethical implications of using them?

One of the most popular AI art algorithms is the Generative Adversarial Network (GAN). It is a powerful type of neural network which is used for unsupervised machine learning. It consists of two neural networks working together – a generator and a discriminator.

Yash Khot TE-B

The generator network generates images, while the discriminator network evaluates the images and provides feedback to the generator to improve its output. This process continues until it produces images that are indistinguishable from human-made art. Below is the basic block diagram of the working of the GAN Models:

But as the saying goes "With great power comes great responsibility"; the ethical implications of using AI-generated art cannot be ignored. One concern is that these software's could be used to generate deep fakes which would be indistinguishable from real-life photographs. This creates major security and privacy concerns. Another ethical issue is the question of who owns the artwork generated by these algorithms.
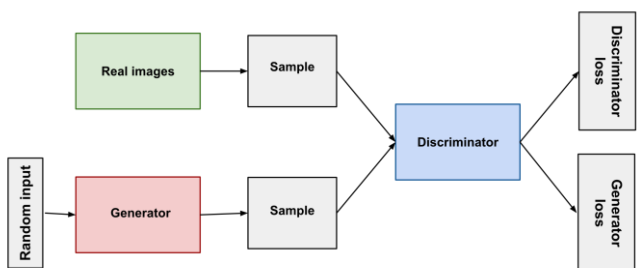
While the algorithm creates the art, it is often the human programmer who has ownership of the output. This raises questions about copyright and intellectual property rights. For example, we can generate a picture of a cat doing a handstand on Mars in Picasso's painting style. But the issue is using Picasso's art form in any painting would be an indirect form of copyright infringement. In conclusion, the rise of AI art is an exciting development in the art world, offering endless opportunities to creators for innovation and design ideas. However, we must see to it that they are used responsibly. The key is to strike a balance between innovation and responsibility, and to use these algorithms as a tool for human creativity, not as a replacement for it.

UPCOMING EVENTS

- DEPARTMENT WILL BE CONDUCTING ELECTIVE ORIENTATION FOR SE AND TE STUDENTS IN APRIL 2023.

- DEPARTMENT WILL BE CONDCUTING DAB MEETING IN APRIL 2023

- CSI WILL HOST 24 HOURS HACKATHON WITH CESA IN JULY 2023

- TEDxVIT 2023 WILL BE ORGAINIZED IN JUNE 2023

- CSI WILL HOST ITS FLAGSHIP EVENT ETHUSIA IN APRIL 2023

> "
> The difference between school and life? In school, you're taught a lesson and then given a test. In life, you're given a test that teaches you a lesson
> — Tom Bodett
> "

THE

Editorial Team

PROF. AMIT K. NERURKAR

Chief Editor