JCEI's Jaihind Polytechnic, Kuran

Computer Engineering

Newsletter

Content

TO ENHANCE SKILLS IN STUDENTS AT THE DIPLOMA LEVEL THROUGH VALUE-BASED TECHNICAL EDUCATION, CONTRIBUTING TO THE COUNTRY'S PROGRESS IN THE FIELD OF COMPUTER ENGINEERING.

MISSION

M1:*IMPARTING HIGH STANDARD TECHNICAL EDUCATION IN ALL ASPECTS OF COMPUTER ENGINEERING.*

M2: *DEVELOPING BETTER CHARACTER DRIVEN EDUCATION THROUGH TEACHING SYSTEM.*

M3: *CULTIVATING CAPABLE AND EFFICIENT TECHNICAL TALENTS.*

M4: *DEVELOPING WELL SKILLED AND EQUIPPED STUDENTS FOR THE DEMANDS OF THE INDUSTRY*

HOD's Message…….

The Computer Engineering program was started in the year 1997 with intake of 120 seats. The main focus of the department is to deliver the professionals with strong and Placement. The department has well equipped and well-furnished 7 labs.

Department of Computer Engineering is prepared to meet the challenges and is playing a leadership role in shaping the education of the 21st Century by providing the lifelong learning and leadership skills to the students that enable them to grow in their professions and advance to positions of responsibility. The main motto of our department is to provide quality education. The process of learning is extremely important in everyone's life. For that, we provide excellent infrastructure, many values added courses, teaching faculty of the best kind ensuring quality education such as interaction among students, parents and staff ensures a bright future to our students.

The Department also has a departmental library, computer centre and seminar hall. The department focuses on the overall fundamentals in Computer Science and Engineering Domain. The department has well qualified and experienced teaching faculty members with various specializations. The department has excellent infrastructure with state-of-the-art equipment and software tools. The activities of the Department are conducted, besides teaching, in the areas of research, consulting, training, alumni and Training development of the students imparting Industry standard skills through Projects and by encouraging Student Association activities and Industrial visits.

I congratulate the team of faculty members and the students for their brilliant and original efforts. I wish all the Students and Faculty a great academic career.

Prof. Jadhav V. V.

HOD of Computer Engineering

Program Educational Objectives (PEOs)

PEO-1: Engineer will apply knowledge of basic mathematics, science, and discipline to design and develop systems in multi-disciplinary environments.

PEO-2: Engineer will work as an individual or a team member with effective communication exhibiting ethical values having environmental concerns.

PEO-3: Engineer will engage in lifelong learning, career enhancement and adopt changes as per professional and societal needs.

Program Specific Outcomes (PSOs)

PSO 1. Computer Software and Hardware Usage: Use state-of-the-art technologies for operation and application of computer software and hardware.

PSO 2. Computer Engineering Maintenance: Maintain computer engineering related software and hardware systems.

Program Outcomes (POs)

PO1 : Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

PO2: Problem analysis: Identify and analyze well-defined engineering problems using codified standard methods.

PO3: Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

PO4: Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests

PO5: Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

PO6: Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

PO7: Life-long learning: Ability to analyze individual needs and engage in updating in the context of technological changes.

Departmental Events

Guest Lecture

Expert Lecture No. :- 1

1) Name of Topic: "Identifying Market Gaps : How to Spot Opportunities for Your Software Project"
2) Name of Guest: Mr. Dilip Singh (CEO, Innovatus Technologies, Pune)
3) Date: 01 Aug 2024

Expert Lecture No. :- 2

1) Name of Topic: "Artificial Intelligence Fundamental "
2) Name of Guest : Mr. Ketan Sathe (IPTA, Pratham InfoTech, Pune)
3) Date: 10 January 2025

Expert Lecture No.:-3

1) Name of Topic: "Use of AI in Web Development"
2) Name of Guest : Mr. Yuvraj Hande
3) Date: 11 January 2025

Expert Lecture No.:-4

1) Name of Topic: "Career Opportunities in Data Science"
2) Name of Guest : Mr. Atharva Shinde (Android Developer at ProAzure Software Solution Pvt.Ltd)
3) Date: 17 March 2025

Personality Development Activity

Activity No.:-1

1) Name of Topic: "Digital Detox"

2) Name of Guest: B. K. Manisha Didi, B. K. Sapna Didi, B. K. Roshni Didi

3) Date: 11 January 2025

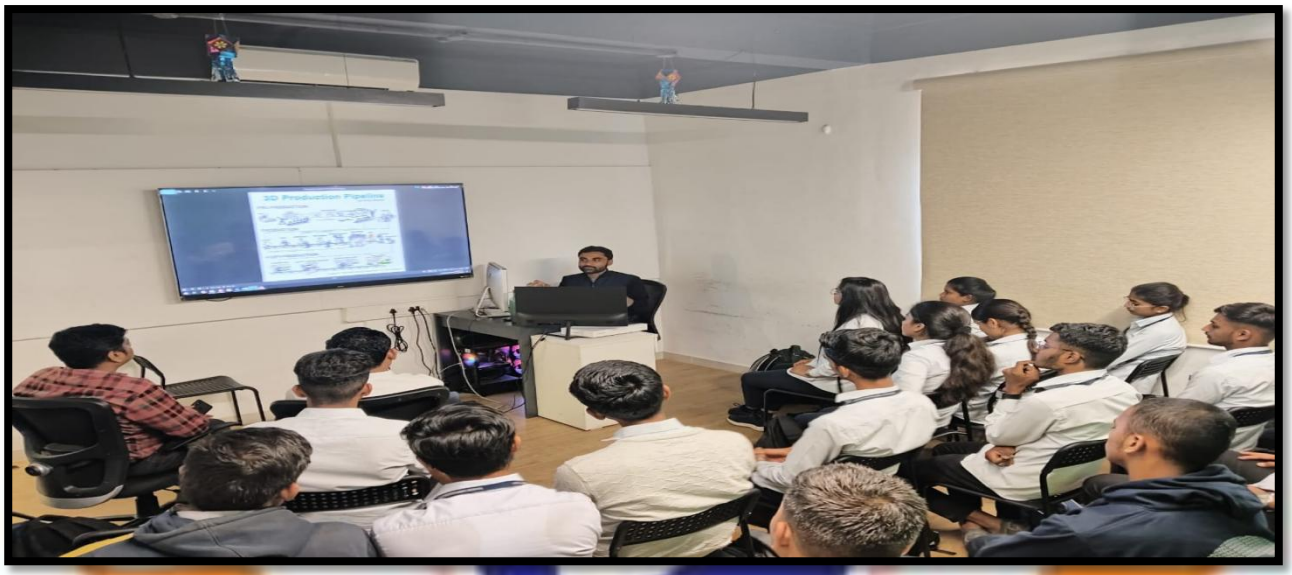
Industrial Visit

1. Company Name: Maya Academy of Advanced Creativity, J. M. Road, Shivajinagar, Pune

Date: 25/02/2024

Name of Staff: Mr. Jadhav V. V., Mr. Dumbare S.B., Ms. Dumre S.P., Mrs. Lonare S.B.,Ms. Magar A.S.

No. of Students: 64 (SY)



2. Company Name: GMRT Observatory, Khodad

Date: 28/02/2025

Name of Staff: Ms. Shah D.S., Mrs. Bankhele P.K., Mrs. Kokane M.G. Mr. Badhe M.S.

No. of Students: - (TY)

3. Company Name: Sumago Infotech, Nashik

Date: 20/03/2025

Name of Staff: Mr. Jadhav V. V., Ms. Magar A.S., Ms. Shah D.S.,

No. of Students: - 70(TY)

Workshop

Workshop No:-1

Name of Workshop: "Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL)"
Date: 15/10/2024 to 17/10/2024
Conducted By: Mr. Dilip Singh, CEO, Innovatus Technologies, Pune

Workshop No:-2

Name of Workshop: "Cloud Computing and AWS Services"
Date: 17/02/2025 to 18/02/2025
Conducted By: Mr. Dilip Singh, CEO, Innovatus Technologies, Pune

Faculty Development Program:1

Name of Event: FDP On "Quantitative Methods for CO, PO and PSO Mapping and Attainment Analysis"
Date: 15-11-2024 to 16-11-2024
Participants: 42
Conducted By: Mr. S.A. Patil (Lecturer in Computer Technology, Sanjivani K.B.P. Polytechnic, Kopargaon)

Faculty Development Program:2

Name of Event: FDP On "Road Map to NBA Accreditation"
Date: 11-02-2025 to 12-02-2025
Participants: 60
Conducted By: Dr. Ganesh Jorvekar (HOD of Computer Technology, Sanjivani K.B.P. Polytechnic, Kopargaon)

Teachers Day Celebration

Venue: Computer Department Seminar Hall
Date: 05-09-2024
Time: 03:30 PM - 04:30 PM




Woman's Day Celebration

Venue: Computer Department Seminar Hall
Date: 08-03-2025
Time : 03:30 PM - 04:30 PM


Articles

Staff Articles

Artificial Intelligence and Virtual Reality: Shaping the Future

In today's digital world, two powerful technologies—Artificial Intelligence (AI) and Virtual Reality (VR) are transforming the way we live, learn, and work. Both are revolutionizing industries like education, healthcare, gaming, and engineering, making our experiences more intelligent and interactive.

The capacity of robots to think, learn, and make judgments similarly to humans is known as artificial intelligence. From voice assistants such as Alexa and Siri to smart recommendation systems on YouTube and Netflix, AI has already become a part of our daily routine. AI in education aids educators in monitoring student progress and offering tailored learning assistance.

Conversely, virtual reality produces a realistic-feeling computer-generated environment. Wearing virtual reality headsets allows users to do research, explore 3D worlds, and even practice surgery without taking any risks in the real world.

The possibilities are unlimited when AI and VR are combined. Imagine a virtual factory where AI robots help with production, or a virtual reality classroom where an AI teacher responds to your inquiries.

These technologies do, however, come with drawbacks, such as the requirement for qualified personnel, hefty costs, and data privacy issues. Students need to become ready by studying data analysis, VR design, and AI programming.

Like every technology, AI and VR also have both positive and negative impacts. On the positive side, they make education more practical, healthcare more accurate, industries more efficient, and entertainment more engaging.

In conclusion, AI and VR together represent the dawn of a new digital era. They have immense potential to shape our future in positive ways if used responsibly. These technologies are not here to replace humans, but to empower them.

Ms. Shelake R. M.
Lecturer in Computer Engineering Dept.,

Growing with Intelligence: Smart Agriculture Meets Generative AI

The rapid advancement of digital technologies is reshaping traditional industries, and agriculture is one of the most significant beneficiaries. 'Smart Agriculture and AgriTech' combine IoT sensors, drones, satellite imaging, and data analytics to optimize farming practices. These tools help farmers monitor soil moisture, nutrient levels, crop diseases, and weather patterns in real time. As a result, farmers can make data-driven decisions such as when to irrigate, apply fertilizers, or control pests. This shift from manual observation to technological intervention enhances crop yield, reduces resource wastage, and promotes sustainable farming.

Parallel to these developments, the rise of Generative AI tools - such as ChatGPT, Midjourney, Claude, and Gemini has revolutionized the way humans create content, solve problems, and automate tasks. These tools generate text, images, music, videos, and even computer code using advanced machine learning models. .

The integration of Generative AI with Smart Agriculture is creating a powerful ecosystem. AI-driven drones can scan large farmlands and instantly generate visual reports, while generative models can analyze the data and suggest personalized recommendations. For example, AI can identify early signs of plant disease from images and automatically generate a treatment plan.

Overall, the combined impact of 'Smart Agriculture and Generative AI' represents a major technological leap that supports global food security. As the world faces rising population, climate change, and limited resources, these innovations are essential for building sustainable farming systems.

Ms. Magar A. S.

Lecturer at Computer Engineering Dept.,

Student Articles

MACHINE LEARNING

Machine Learning is a modern technology that enables computers to learn from data and improve their performance over time. Instead of working only on fixed instructions written by programmers, machines observe examples, analyze data, and discover patterns on their own. This ability helps computers make decisions and predictions more accurately. As more data is provided, the system becomes smarter and more efficient, making machine learning very useful for solving complex real-world problems.

In traditional programming, every step must be clearly defined, which is not always possible for complicated tasks. Machine learning overcomes this limitation by allowing systems to adapt automatically. It is especially helpful in situations where data is large and continuously changing. Because of this flexibility, machine learning has become an important part of modern software and technology.

In our daily life, machine learning is used more often than we realize. Applications like YouTube, Netflix, and Spotify suggest videos, movies, and music based on our interests. Online shopping websites recommend products by studying user behavior. These features save time and make digital platforms more user-friendly and personalized.

Machine learning is also used in smartphones and communication systems. Email services use it to filter spam and protect users from harmful messages. Mobile phones use machine learning for face recognition, voice assistants, camera enhancements, and predictive typing. These applications make devices smarter and improve the overall user experience.

In the healthcare field, machine learning is helping doctors and hospitals improve patient care. It is used to analyze medical images, lab reports, and patient data to detect diseases early. Machine learning systems can also predict health risks and help doctors choose better treatment plans, leading to faster and more accurate medical decisions.

Education is another field where machine learning is making a positive impact. Online learning platforms use it to track student performance and learning habits. Based on this information, they suggest suitable study materials and learning paths.

Dalvi Sanskruti Sunil

(TYCO 2024-25)

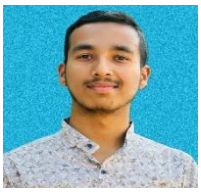
Bio-Digital Convergence: Programmable Matter and Smart Environments

Bio-Digital Convergence represents a fundamental shift in our relationship with the physical world, moving us toward environments where the boundary between the biological and the digital dissolves. At the heart of this transformation is programmable matter—a class of materials whose physical properties, such as shape, density, and even function, can be controlled digitally.

The mechanics of this technology rely on the convergence of several advanced fields. One leading concept involves "claytronics," which are composed of millions of microscopic robots, or "catoms," that can communicate and rearrange themselves into three-dimensional shapes. These catoms would form ensembles, collectively acting as a form of synthetic, reconfigurable material. This system would be governed by a sophisticated artificial intelligence, interpreting user intent to orchestrate the matter into the desired form, while a dense network of sensors allows the environment to perceive and respond to its biological inhabitants in real-time.

On a domestic scale, an empty room could generate furniture on demand—a sofa, a desk, or a dining table—that recedes back into the floor when no longer needed. In medicine, a smart cast could not only immobilize a broken bone but also monitor healing progress and administer targeted therapies. On a larger scale, architectural structures could become dynamic, with walls that move to reconfigure space and façades that adapt to optimize energy efficiency, creating a truly living, breathing built environment.

However, the path to such a future is fraught with significant challenges and ethical dilemmas. The engineering required to create and power microscopic, self-organizing systems at scale remains a monumental hurdle, and the software to control themis incredibly complex.



Hande Yashraj Dinesh

(TYCO 2024-25)

Quantum Neural Interfaces: The Future of Brain–Computer Fusion

The brain is the most complex computer there is, but previously, it was difficult to connect this extraordinarily capable organ with machines. The Quantum Neural Interface (QNI) is a forthcoming technology that will create a bridge between the brain and computers using quantum sensors; sensors so sensitive that they can read the tiny magnetic signals produced by the brain without the need for devices such as hardware or scanners.

The Quantum Interfaces, unlike todays existing brain-computer interfaces, relies on the detection of changes in the energy fields in the brain rather than being wired or attached with electrodes. The QNI will allow this process to take place much faster, safer, and more accurately. Imagine you could control a wheelchair, a robot, or a computer by thinking about it—simultaneously and without any instructions or expert operation. Scientists are already attempting to study how these interfaces can improve lives for individuals with paralysis or brain disorders and restore lost functions.

Quantum Neural Interfaces may also have potential to dramatically change medical diagnostics. Doctors may be able to monitor activity in the brain in real time, to the point of detecting diseases such as Alzheimer's or epilepsy before there is symptoms. In education, children could learn in faster succession through direct feedback from the brain and on their brain performance. Communication, in many cases, may change as well in the not so distant future when thoughts or feelings could be sent in digitized form, and in the same manner we send messages, we send words or feelings.

Hande Sakshi Manik

(TYCO 2024-25)

Cognitive Digital Twins: The Next Evolution of Human–AI Collaboration

Today's world, technology is increasingly becoming more personalized and human-like, evident with a new, interesting technology known as the Cognitive Digital Twin that may soon be a virtual representation of you thinking, learning, and making decisions exactly like you did physically. Digital twins are technology that uses AI, machine learning, and tons of data about you, personally, on anything you do and how you do it, how you think through problems, and even make decisions, all to replicate your process digitally.

The primary purpose of Cognitive Digital Twin technology is to actively support the user's decision about anything in real time. For instance, a physician might have a Cognitive Digital Twin that would be able to sift through patient records at hyper-speed and get suggested treatment recommendations. A manager could use his or her Cognitive Digital Twin to investigate due diligence decision-making models prior to any action. This is not a robot, but a clever assistant, with personality capabilities, that recognizes personal desires.

In business or industries, Cognitive Digital Twins can save time and resources, improve human error, while enabling human capital to be valued for producing efficiency. Cognitive Digital Twins can support students' learning in a personalized learning experience that accelerates learning. The Cognitive Digital Twins will know study habits of the user, and offer next study locations or suggestions for improving performance. Cognitive Digital Twins exist now in several other industries, including healthcare, business, while delivering additional opportunities for consumers.

Shingare Prajwal Vijay

(TYCO 2024-25)

Faculty Attended Training/Development Program:

2024-25		
Sr No.	Name of Faculty	No. of FDP
1	Mr. Jadhav. V. V.	3
2	Ms. Shelake. R. M.	4
3	Mr. Dumbre. S. B.	3
4	Mrs. Bankhele. P. K.	2
5	Ms. Shete. K. B.	3
6	Mrs. Bhalerao. D. N.	5
7	Ms. Magar. A. S.	5
8	Ms. Shah. D. S.	1
9	Ms. Dumbre. S. P.	4
11	Ms. Chaudhari. G. C.	1
12	Ms. Ganjave D. B.	2
13	Ms. Lonare. S. B.	4
15	Ms. Shinde. P. T.	2
16	Mr. Auti. P. V.	5
17	Mr. Dhamale. B. R.	1
18	Ms. Kokane. M. G.	1
19	Ms. Bhumkar. B. D.	1
22	Ms. Thorat P.T.	2

Students Achievements

- **Competition: Ideathon**

Participants : Hande Yashraj Dinesh, Hande Sakshi Manik. Krushnarth Chavan
Location : Jaihind College of Engineering, Kuran
Achievement : 2nd prize & Trophy
Date : 13-08-2024

- **Competition: Poster Presentation**

Participant : Hande Yashraj Dinesh, Hande Sakshi Manik, Krushnarth Chavan
Location : Jaihind College of Engineering, Kuran
Achievement : 2nd prize & Trophy
Date : 16-08-2024

- **Competition: AI Powered Codex**

Date of Event : 07-10-2024
Location : JCEI'S Jaihind Polytechnic,Kuran
1st Rank : Om Ajit More, Pankaj Dipak Bhor
2nd Rank : Manasi Pravin Gunjal, Sanskruti Sunil Dalavi
3rd Rank : Prajwal Vijay Shingare, Swaroop Bajirao Sarjine

- **Competition: Project Competition "PROJECT EXPO-2K25"**

Participant : Sanskruti Dalavi, Shravani Hinge, Manasi Gunjal, Samiksha Khandagale
Date of Event : 02-03-2025
Location : JCEI'S Jaihind Polytechnic,Kuran
Achievement : 2nd Rank

- **Competition: Project Competition "AMRUT FEST 2K25"**
  Participant : Sanskruti Dalavi, Shravani Hinge
  Date of Event : 21-03-2025
  Location : Amrutvahini Polytechnic, Sangamner

Co-curricular Activities

Induction Program 2024

Location : JCEI'S Jaihind Polytechnic, Kuran

Date : 20-08-2024 to 24-08-2024

TECHNOLOPHILIA 2K24-25---AI Powered Codex

Location : JCEI'S Jaihind Polytechnic, Kuran

Event Date : 07-10-2024

A State Level Project Competition "PROJECT-EXPO 2K25"

Location : JCEI'S Jaihind Polytechnic, Kuran

Event Date : 02-03-2025

Extra-Curricular Activities

InterZonal IEDSSA Sports Achievements

Location : Sanjivani K.B.P. Polytechnic, Kopergaon
Winner team in Volleyball Girls
Date : 04-03-2025
Co-ordinator : Ms Shete K.B., Mr. Abuj D.K.

Location : Rajgad Dnyanpeeth Technical Campus, Bhor
Om Ajit More Winner in Weightlifting
Co-ordinator : Mr. Benke V.G., Mr. Harshal Ranpise

Zonal Sports-D1 Zone IEDSSA Achievements

Location: Ajeenkya D Y Patil Lohgaoan
Runner up in Carrom
Date: 30-01-2025
Co-ordinator : Ms. Gauri Dhole
Participants: Gaikwad Sakshi, Kurkute Shruti, Jundare Anushka, Patare Arya, Vishwe Archana

Location : Samarth Polytechnic, Belhe
Winner team in Kabbadi Girls
Date : 21-01-2025
Co-ordinator : Mrs. Kokane M.G., Mr. Kanade K.A.

Location : Ramchandra Polytechnic, Lonikand
Runner up team in Cricket Boys
Co-ordinator : Mr. Mangesh Jadhav. Mr. Harshal Ranpise

Location : Jaihind Polytechnic, Kuran
Winner team in Volleyball Girls
Date : 13/02/2025
Co-ordinator : Ms Shete K.B.

Location : Samarth Polytechnic, Belhe
Winner team in Athletics
Date : 25-01-2025
Co-ordinator : Mr. Dumbre S.B. , Mrs. Gighe S. K.

Location : Zeal Polytechnic, Narhe
Runner up team in Football
Date : 31-01-2025
Co-ordinator : Mr. Bhor A. S.

MSBTE Examination Topper

Department of Computer Engineering

Winter 2024 Examination Topper List (AY 2024-25)

Course	Rank	Photo	Name of the Candidate	Marks Obtained	Out of	%
FYCO	1		DANGAT SARTHAK NITIN	**751**	850	88.35
	2		GIDE SAIL SUBHASH	**747**	850	87.88
	3		AUTI SANSKAR PRAKASH	**741**	850	87.18
SYCO	1		SHETE SHREYA SANDIP	**783**	850	92.12
	2		NALAWADE SIDDHI SUDHIR	**782**	850	92

	3		SHELAR AVANTI AVINASH	**780**	850	91.77
TYCO	**1**		HANDE YASHRAJ DINESH	**864**	900	96
	2		DALVI SANSKRUTI SUNIL	**861**	900	95.67
	3		HANDE SAKSHI MANIK	**858**	900	95.33

THANKS

Head of Department

Mr. Jadhav V. V.

Editor

Ms. Ganjave D. B.

Student Members:

Dangat Ved Kishor

Gunjal Mansi Pravin