

MKSSS'S
CUMMINS COLLEGE OF
ENGINEERING FOR WOMEN, PUNE

(An Autonomous Institute affiliated to Savitribai Phule Pune University)



DEPARTMENT OF COMPUTER
ENGINEERING

ECHO

NEWSLETTER

ACADEMIC YEAR 2024-25

Issue 32



To code is to cast
a spell that turns
ideas into impact.

VISION

To equip women with an excellent education in Computer Engineering enabling them to play significant leadership roles in technology and society.

MISSION

1. Impart excellent education, necessary skills, training, and experimentation capabilities in the field of computer science and engineering.
2. Create a vibrant and intellectually stimulating environment for students to promote innovative and multidisciplinary real world problem solving.
3. Develop women professionals and imbibe work ethics and leadership skills in them, thereby helping them pursue successful careers and contribute to science and technology.
4. Collaborate with industry and other universities to help create competent computer professionals.
5. Strive to fulfill the expectations of all relevant stakeholders.

Program Education Objectives

1. To prepare students for academic competence, to be employed as computer professionals, for industry, higher studies, research, entrepreneurship and to significantly contribute to the society at large.
2. To develop students' fundamental knowledge related to mathematics, science, computer science, computer engineering and to make them capable of providing solutions to challenging problems and multidisciplinary problems
3. To enrich students with soft skills, leadership skills, professional skills, and work ethics to make them good computer professionals and role models for future generations.
4. To prepare students capable of self learning, to have the ability to adapt to changes, and to possess the ability to understand the impact of engineering on society and humankind

Program Specific Outcomes

1. Graduates capable of working in various domains, solving problems by applying knowledge and skills from Software Development, Networking, Databases, Internet of Things, and Embedded Systems.
2. Graduates capable of developing, maintaining software services, software products, and embedded systems by applying the entire software development life cycle.



From the HOD's Desk

It gives me immense pleasure to present this edition of our Computer Department newsletter “Echo”, highlighting the achievements and milestones of this academic year. Our department has always been at the forefront of academic excellence, innovation, and holistic student development, upholding the rich culture, history, and legacy of the institution. This year, our students have once again made us proud with their outstanding academic performances. The year also witnessed strong placement outcomes, with leading companies offering opportunities to our graduates, reaffirming the industry’s trust in the quality of our programs and talent.

Beyond academics, our students have actively participated in a variety of co-curricular and extra-curricular activities—be it technical competitions, hackathons, cultural fests, sports events, or community outreach programs. Their involvement not only enhances their skills but also contributes to the vibrant and dynamic atmosphere.

Our faculty members, too, have excelled in research, publications, and industry collaborations, continuing to inspire students through both classroom teaching and their professional achievements. Their commitment to student mentoring and innovative teaching practices is a cornerstone of our department's success.

I would like to congratulate all the students & faculty achievers who have participated in various Co-curricular and Extra-curricular activities.

I sincerely appreciate our student panel members for making campus atmosphere vibrant. Their dedication, leadership, and teamwork have greatly contributed to the success of numerous events and have set a benchmark for future batches.

I sincerely express my gratitude towards our respected Principal Dr. Madhuri Khambete Madam, and our Samstha management for their trust and continuous support.

I also extend my gratitude to our students, faculty, staff, alumni, and industry partners for their invaluable contributions in preserving and enriching the proud legacy of our institute, and indeed, our department. With shared commitment and passion, let us continue to foster innovation, nurture talent, and inspire excellence.

Dr. Sunita Jahirabadkar

Head of Department, Computer Engineering,
Cummins College of Engineering for Women, Pune

From the Editor's Desk

Welcome to the 32nd edition of Echo!

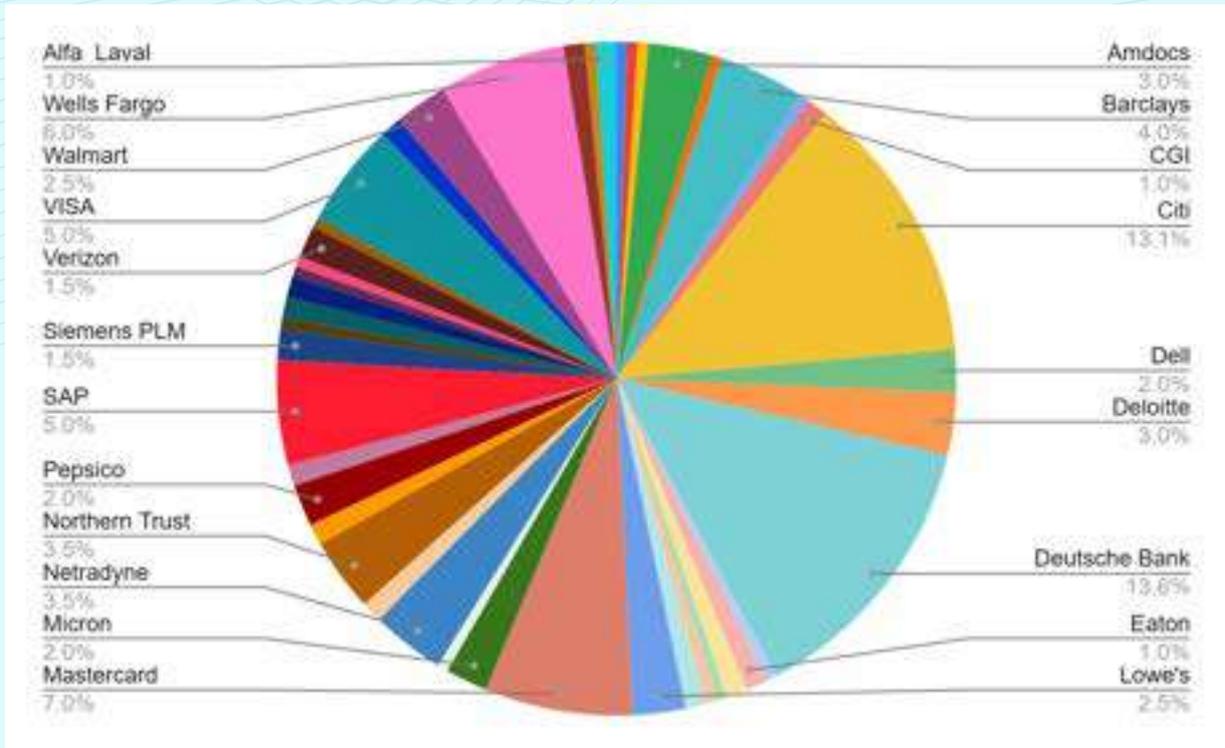
Working on echo newsletter has been a truly enriching experience for us. As members of the computer engineering department, we take pride in contributing to a platform that celebrates the creativity and accomplishments of our students and faculty. Every stage of the process—from brainstorming ideas to bringing the edition to life—was exciting and strengthened our spirit of teamwork.

Being involved in shaping the current edition of “Echo” made us feel like visionaries in our own way, deciding how the accomplishments and stories of our department are presented and shared. We are deeply grateful for the guidance and support of our teachers, who stood by us at every stage and made this journey smoother.

The journey of creating Echo has been unforgettable, and we hope you enjoy reading it just as much as we enjoyed creating it.

Team Echo

Placements 2024-25



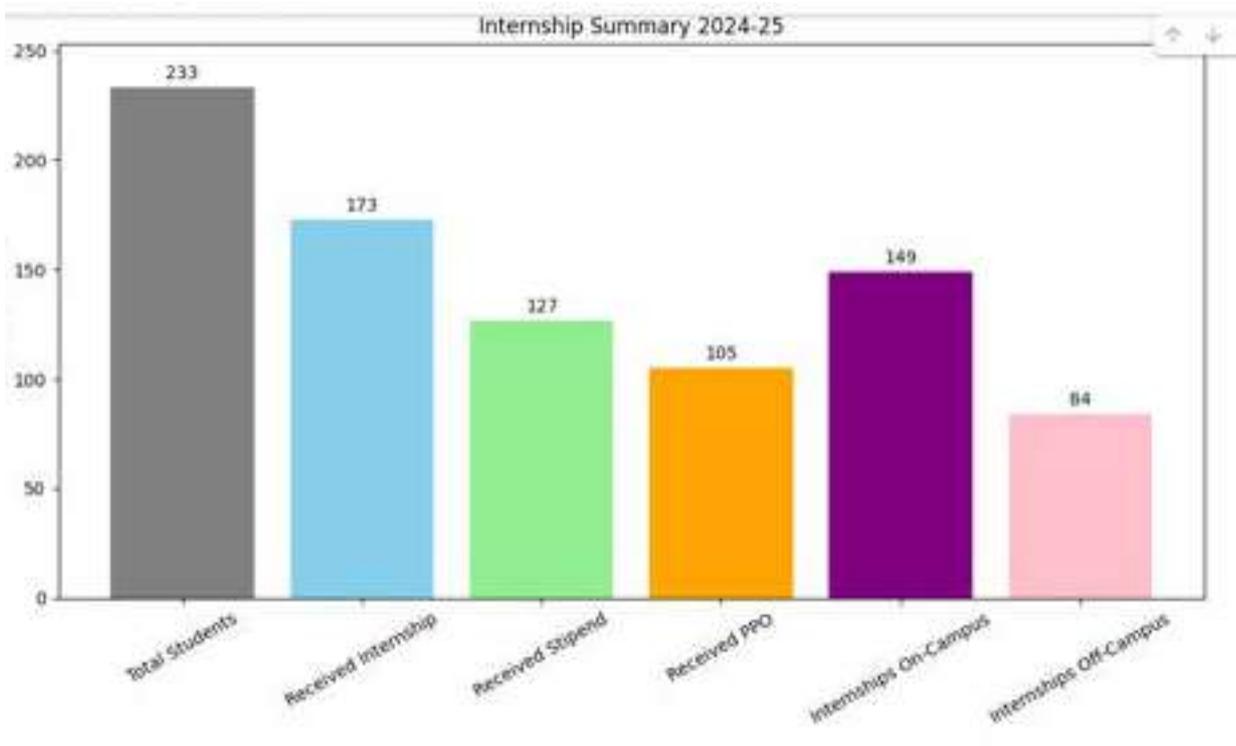
Highest Package (Adobe Company)	47.64L
Average Package	16.7L
Median Package	18L

**Computer Engineering Department
Overall Placement : 87% (205/235)**



Internships

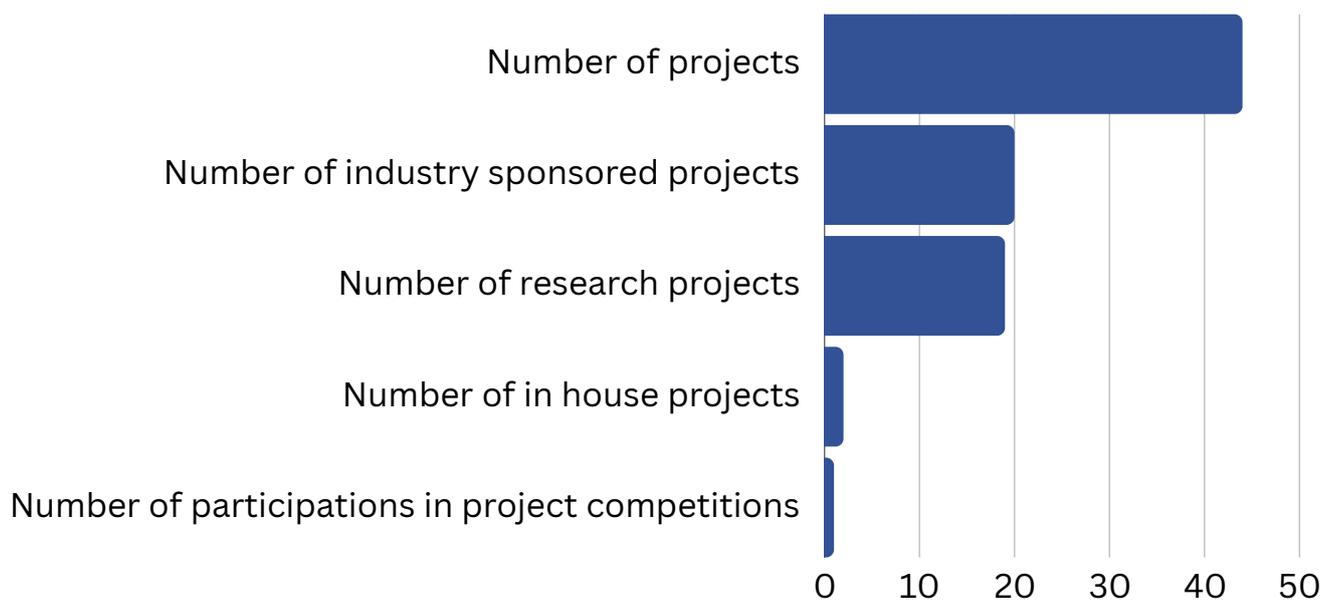
INTERNSHIPS	
Number of students received Internships	173/242 (71.86%)
Number of students received stipend	104
Number of companies offered internship	83
Number of students received Pre-Placement Offer (PPO)	105/173 (60.69%)
No. of Students Received PPO	105/242



PROJECTS

Number of projects	44 (2/4/6 Months)
Number of industry sponsored projects	20
Number of research projects	19
Number of in house projects	02
Number of participations in project competitions	01

Summary of Projects 2024-25





Echoes of Excellence

Alumni Spotlight

SARIKA DHOOT

Head of Business
Development at
Heera Software



Pass-out year : 2015

“Built with logic , leading with vision”



Q. How did your time at Cummins shape your personality or career path?

My four years at Cummins College were transformative, highlighting the importance of peer learning, communication, and exposure to diverse perspectives. The college's strong focus on problem-solving and ownership deeply shaped my approach to challenges in both career and life

Q. One of the major doubts that college students have is whether to go for a Masters' degree or industry experience after graduation. What would you recommend?

I pursued my master's immediately after engineering but, in hindsight, feel that gaining 1-2 years of industry experience would have better prepared me. Working first could've helped me develop the maturity and communication skills expected abroad, especially in the U.S. If advising others, I'd strongly recommend gaining some work experience before pursuing higher studies.



Q. You pursued a Master's in Management Information Systems from the University of Maryland - what motivated you to go for this degree instead of traditional MSc or MTech?

I chose a Master's in Information Systems because it allowed me to combine my interest in technology and AI with business-oriented learning. It offered the perfect blend of coding, data analytics, and strategic business courses that aligned with my goals.





Q. Can you tell us about your current role at Heera Softwares and what a typical day looks like?

I am the Head of Business Development at Heera Softwares, with experience across data analysis, product and project management, security, compliance, and AI projects. I now focus on enterprise client engagement, go-to-market strategy, cross-team collaboration, and designing AI-driven solutions to enhance our products and deliver value to customers.

Q. Under the NEP curriculum, we have subjects like EIS(Enterprise Information Systems) or ERP. How beneficial would you say such non-core subjects in the industry-readiness aspect?

Learning about ERPs is highly valuable because they form the core of most digital transformation projects in companies. Studying them provides domain-oriented insights, helps you understand cross-functional processes, and develops skills that go beyond core technical subjects, preparing you for real-world industry scenarios.

Q. What keeps you motivated during tough days?

Everyone feels tired or unmotivated at times, especially when facing difficult days or problems. The key is to cultivate discipline and establish a consistent routine that keeps you productive regardless of motivation. A balanced routine should include learning, work, self-care, and maintaining both mental and physical health. By consistently following good habits, you enable compounding growth over time, letting discipline carry you through even low-motivation days.



FUN FACTS

1

The Firefox logo is actually a red panda, not a fox.

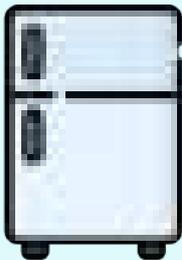


2

Javascript was created in 10 days!

3

In terms of electrons in motion, the internet weighs about the same as a strawberry.



4

The first 1GB hard drive cost \$40,000 and was the size of a fridge.

5

Did you know the first ever computer mouse was made of wood!





STUDENTS SPOTLIGHT





Best Outgoing Student



Congratulations
Gargee Dorle

Your hard work has paid off –
here's to a bright future ahead!



RESULTS 24-25



TOPPERS SY 24-25

RANK	STUDENT NAME	CGPA
1	JUI SANTOSH KULKARNI	9.51
2	NARMATA BHAT	9.51
3	SHREEYA NARAYANAN	9.46

TOPPERS TY 24-25

RANK	STUDENT NAME	CGPA
1	SANJANA INAPAKOLLA	9.49
2	APOORVA ATRE	9.46
3	MAHADIK ADITI	9.34

TOPPERS FINAL YEAR 24-25

RANK	STUDENT NAME	CGPA
1	SANIYA DIGH	9.5
2	SHREYA AGRAWAL	9.48
3	SANIYA MAHALLE	9.46



Co-Curricular Activities

- Rudrika Sharma & team won first prize at Citi Innovation Challenge and won a cash prize of Rs. 2 lakhs
- Ananya Shroff and her team reached top 5 in Citi Innovation Challenge 5.0 out of 1800 participants and won a cash prize of Rs. 50,000
- Ananti Mule & Shruti Kulkarni won 1st Prize in Open Software Concepts of PICT's Impetus & Concepts organized by Pune Institute of Computer Technology in March 2025.
- Siddhi Vaidya, Shreya Gujrathi, Shruti Thakur, Eesha Kamath, Vaishnavi Ahire are the winners of Infosys Springboard Ideathon, organized on national level by Infosys Springboard.
- Tanisha Chavan is the 3rd prize winner of Plas Hunter coding competition, organised by Dr. D.Y. Patil ACS College, Pune.
- Pritee Pardeshi won 2nd Runner Up of Wabtec Exceed 3.0 Campus Solution Challenge, a national-level on-campus competition



- Chinmayee Randive got 27th rank in national level Entrepreneurship competition NEC organised by IIT Bombay
- Adwita Jain won 1st prize in Synapse 2.0, organized by Cummins College of Engineering for Women, Pune and won 3rd Runner Up in Buffer organized by Loop Club, Cummins College of Engineering for Women, Pune.
- Vaibhavi Malche, Snehal Meshram, Siddhi Uttarwar, Ahilya Kerle are the 3rd prize winners of Hack Celestia, organised by Banasthali University, Rajasthan at the national level.
- Gautami Kulkarni has received the Lila Poonawalla Foundation Scholarship for the period 2023–2027.
- Harshali Agarwal is the winner of Hackathon Indo AI coding competition, organised by Cummins College of Engineering for Women, Pune.
- Sneha Gupta won 2nd place in Buffer 5.0 competition held in Pune on organised by Cummins College of Engineering, Pune

Congrats!

- Sanika Deokule, Aarya Gawade, Ashelesha Chaware, Nishita Katepallewar, and Dhanshri Patare were selected for the prestigious Women Engineers (WE) Program by TalentSprint, supported by Google. Out of 30,000+ applicants nationwide, they were among the top 200 girls chosen for this career acceleration initiative.
- Sanika Deokule, Aditi Parekar, and Ishita Rane were selected for the LinkedIn CoachIn Program, which received over 18,000 applications from across India. They were among the top 80 students selected for this mentorship-based, industry-focused program.
- Divya Chaudhari won the Hacktoberfest coding competition , organised by Mozilla Club, Cummins College of Engineering for Women, Pune.
- Aditi Joshi won the Cipher 7.1 coding competition, organised by Cummins College of Engineering for Women, Pune.
- Sharvi Burse won 1st prize in AICVS Kaggle coding competition, organised by Cummins College of Engineering for Women, Pune.

Congrats!

- Anjali Mhetre is the 3rd rank holder in Ideathon competition in Innovation, organized by Cummins College of Engineering for Women, Pune
- Vaishnavi Ahire is the 2nd prize winner of Katalyst Tech Fest 2025
- Sanjana Nagwani is the 1st winner of the Investify competition organised by E-Cell, Cummins College of Engineering for Women, Pune
- Gauri Pachling received outstanding award in Indovate AI Sprint Hackathon 2025 organised by IEEE CIS CCEW student branch & IndoAI Technologies at national level
- Ruchi Honale was selected as SWE India Scholar for the academic year 2024-25
- Anagha Kumar was selected as a mentee at Adobe in a program organised by Adobe Career Academy
- Anisha Jain received the SWE Scholarship
- Shreya Mote won Allianz Tech Championship

Congrats!

- Annada Dash, Piyusha Patil, Annada Dash & Bhairavi Bhuyar presented a paper “Securing Oil and Gas Infrastructure: An Analysis of Emerging Cybersecurity Threat.” at the IEEE International conference organized by Cummins College of Engineering for Women, Pune
- Annada Dash and Piyusha Patil presented a paper “AIML-Applications for Engineering” at the 1st International Conference held at Cummins College of Engineering, Pune
- Purva Sarda, Dhanashree Kokare, Ritika Mokashi, Tejaswini Patkar presented a paper “Shabda Anveshak: Comparative Review and Analysis of Marathi Part of Speech Tagging Approaches” at the 1st International Conference held at Cummins College of Engineering, Pune
- Isha Godse, Bhakti Girase, Sakshi Deshmukh, Anuja Taralkar presented a paper “Comparative Analysis of Machine Learning, Deep Learning and Hybrid Models for Fraud Detection in Online Transactions” at OTCON 4.0 Conference at O.P. Jindal University
- Piyusha Patil presented a paper “Efficientnet - Based Model For Brain Tumor Classification in MRI” at the 1st International Conference held at Cummins College of Engineering, Pune

Congrats!

Extra-Curricular Activities

- Parnavi Pate, Asmita Ahire are the winners of the Intercollegiate Yoga Championship, organised by SPPU, Pune.
- Purva Thombre, Sharvari Ughade are the 3rd prize winners of Intercollegiate Cricket, organised by SPPU, Pune.
- Parnavi Pate is the 3rd prize winner of Sarpotdar Karandak, a state-level competition organised by BMCC, Pune.
- Sanika Pawar is the 2nd prize winner in Dodge Ball in Circle, organised as an Intra-College event at Cummins College of Engineering for Women, Pune.
- Mrudula Vilag won the Best Actor award and 2nd prize at Sarpotdar Karandak
- Sneha Bhalerao is the winner of “Lights, Quiz, Action” organised by Cummins College of Engineering for Women, Pune.
- Aarya Patil is the 3rd prize winner of Classical Dance Competition conducted by Cummins College of Engineering for Women, Pune.

Congrats!

- Tanushka Nimbalkar, Kanchan Fadol, Anushka Kondkar, Vaishnavi Ahire, Shreya Gujrathi, Siddhi Vaidya, Eesha Kamath, Sanika Shidore, Siddhani Magar, Sameeksha Ashtekar are the 3rd prize winners of Class Drama at Gandhaar 2025 organised by Cummins College of Engineering for Women, Pune.
- Bhargavi Dange, Samruddhi Kshatriya, Manasvi Dhengre, Arpita Deodikar, Sneha Bhalerao are the winners of the Non-Technical Quiz organised by Cummins College of Engineering for Women, Pune.
- Anushka Kondkar is the 3rd prize winner of the Debate Competition organised by Cummins College of Engineering for Women, Pune.
- Samruddhi Adhikary won the Painting Competition organised by Cummins College of Engineering for Women, Pune.
- Gautami Kulkarni is the 2nd prize winner of the Doodling Competition organised by Cummins College of Engineering for Women, Pune.

Congrats!

- Srushti Jadhav is the 2nd prize winner of the Mehendi Competition, a college-level event organised by Cummins College of Engineering for Women, Pune
- Shreeya Chavan is the winner of the Portrait Competition, a college-level event organised by Cummins College of Engineering for Women, Pune
- Tanushka Nimbalkar, Shravani Joshi, Aditi Parekar, Janhavi Kakade are the winners of the Advertisement Competition, a college-level event organised by Cummins College of Engineering for Women, Pune
- Tanaya Chemate is the winner of the Marathi Online Quiz Competition, a college-level event organised by the Library of MKSSS's Cummins College of Engineering for Women, Pune
- Gauri Bankar, Girija Joshi are the 2nd prize winners of the T-Shirt Sneakers Competition, a college-level event organised by Cummins College of Engineering for Women, Pune
- Mukta Chaudhari is the winner of Trashion at Gandhaar 2025 organised by Cummins College of Engineering for Women, Pune.

Congrats!

- Deepti Jami and Aarya Shetiye won 1st prize in the dance competition at Orion fest organised by Sims Khadki , Pune and 1st prize in Alacrity dance competition organised by AISSMS IOIT, Pune
- Jahnavi Dande, Neha Chatterjee, Riya Morankar, Anaya Kale, Isha Baviskar got 2nd prize in classical dance competition organised by Cummins Colled of Engineering, Pune
- Shruti Jambhale was selected as a trainer for 2(MAH) air squadron NCC Nagpur organised by All India Vayu Sainik Camp
- Vaidehi Sant was in the winning team of Pentacle throwball organised by Cummins College of Engineering, Pune
- Vedika Joshi got distinction in the Green Olympiad for Youth organised by the Ministry of Education
- Sneha Ganjoo won gold medal in J&K UT Arm wrestling competition held at Jammu & Kashmir Power Sports Association
- Sakshi Vaidya, Anisha Jain won Runner Up in throwball at Intra-College Sports Meet Pentacle 2025

Congrats!

- Vaishnavi Repe won Runner Up in football at SPPU football tournament held at Bharati Vidyapeeth College of Engineering
- Ashlesha Kangane, Namita Mahamuni won 3rd rank in Escape room competition held during Gandhaar 2025 at Cummins College of Engineering, Pune
- Piyusha Patil, Janhavi Mishra, Bhakti Girase, Anisha Jain, Sakshi Vaidya won 1st prize at Haute Aura Competition held during Gandhaar 2025 at Cummins College of Engineering, Pune

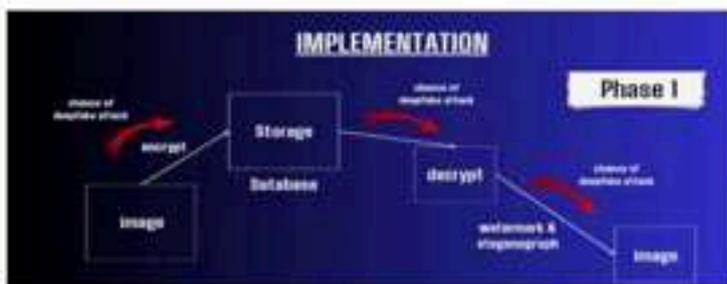


Congrats!

Research Article

Research name: Image Encryption to safeguard from Deepfake

The proliferation of deepfake technology has led to a critical juncture in the digital landscape, whereas the speed at which the visual content is being created is increasingly undermined. In response to this pressing challenge, this research introduces a novel approach aimed at countering deepfake manipulation through the development of a mediator software solution that **makes it difficult for the deep fakers to make unwanted modifications.**



The unique idea of the research scope revolves around targeting the algorithm-**'The Convolutional Neural Network(CNN)'**; which is used more than 90% of the time to create and train models for the deep fakes. To achieve this, **algorithm**

has been developed from scratch to target the convolution layers and the pooling layers that **disrupt the parameter learning process.** One encrypted key for one pixel adds to the complexity of decryption. Additionally, invisible watermarks and steganography have been used to refrain from unwanted access. Furthermore, our approach leverages a **secure cloud database for key storage**, ensuring the robustness of the solution against potential security breaches.



The **originality and novelty** of our idea was born from the critical need to address the escalating threat posed by deepfake technology. **Today, when**

the cybersecurity domain is more interested in finding novel methods for identifying

whether an image or a video is deepfaked or not, we are the stitch in time that will prevent the said event from happening.



Snapshots of prototypes developed during the project showcase the tangible progress made towards realizing objectives.

-By Gargee Dorle



FACULTY FORUM





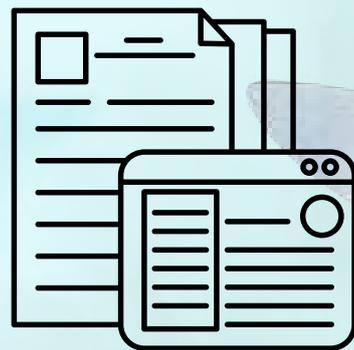
Faculty Awards & Achievements

- Dr. Neeta Maitre received the Best Innovation Award 2024-25 from Savitribai Phule Pune University in Pune on February 10, 2025.
- Dr. Ashwini Rajurkar, Prof. Nilofer Kittad, and Prof. Sulakshana Nagpurkar received Best Paper Award at the 7th IEEE International Conference PUNECON 2024, held online on December 14, 2024.
- Dr. Neeta Maitre was honored with the Women Researcher of the Year Award on March 8, 2025, by the MIT Square Welfare Foundation.
- Dr. Ashwini Rajurkar won the 3rd prize in a Blogathon Competition for faculties, an online event hosted by AISSMS College, Pune on November 13, 2024.
- Prof. Shilpa Pant was recognized as a Top Performing Mentor by NPTEL in Pune for the period of July-December 2024.

Congrats!



Faculty Articles



Patent Title: “A Method for predicting gene presence in a query sequence”

Granted Patent By: Dr. Neeta Maitre

Gene prediction or gene finding refers to a process of identifying regions of genomic Deoxyribonucleic acid (from hereafter referred to as DNA) that encode genes. This includes protein-coding genes as well as RNA (ribonucleic acid) genes, but may also include prediction of other functional elements such as regulatory regions. Finding a gene is one of the first and most important steps in understanding the genome of a species once it has been sequenced. The process of gene prediction is a very crucial step in many biotechnological applications such as gene therapy, disease analysis and the like.

Presently, the gene prediction is carried out on a bioinformatics platform such as computers with a set of software. This involves a stage of gene comparison. A process of gene comparison is carried out to find whether an input gene sequence is matching with existing (stored) gene sequence. Presently, the process of gene comparison is carried out with existing gene comparison software.

In the existing gene comparison software, a user needs to provide a query sequence for comparing and predicting gene presence. The existing gene prediction methods compare provided DNA with already stored DNAs in a database. Generally, size of the query sequence and the stored DNA sequence comprises billions of base pairs. Large amount of data space is required to store the DNA sequence of all organisms and also to store results of the gene comparison. Further, for carrying out the gene presence prediction in a query sequence, more processing time is required.

An expressed sequence tag (from hereinafter referred as EST) is a short sub-sequence of a cDNA (complementary DNA) sequence. The ESTs are used to identify gene transcripts and are instrumental in gene discovery and in gene-sequence determination. The identification of ESTs has proceeded rapidly. Some gene comparison software uses an EST of an organism as input for the gene prediction and the gene comparison. But, the results of the prediction of genes using the EST of the organism are not accurate due to redundancy and inaccuracy at the ends of the EST.

Hence, there is a need for a method for gene presence prediction, which requires less data space, has more processing speed and better accuracy compared to the existing gene comparison methods.

According to the present invention, there is a method for predicting gene presence in a query sequence. The method comprises steps of clustering and storing of middle portions of ESTs derived from ESTs of organisms in a database of a server through an electronic device as representative expressed sequence tags and corresponding candidate expressed sequence tags in the form of clusters. The electronic device is a computer with a set of software for storing the middle portions of the ESTs derived from the organisms in the database. In an alternative embodiment, the server can be a cloud. Length of the middle portion of the EST and the length of respective EST are in the ratio 1:3.

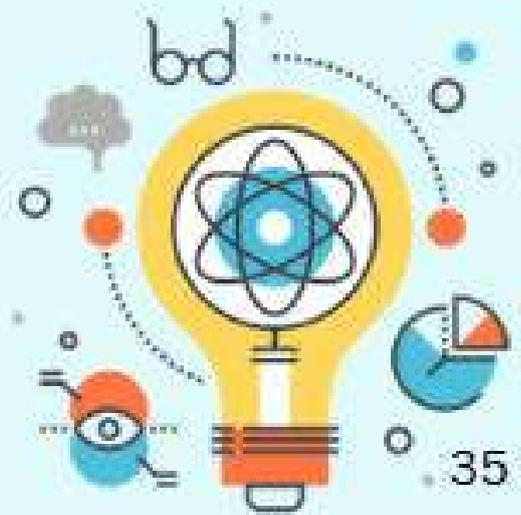
Further, a query sequence that needs to be matched and a similarity index is provided through an input device to the database of the server. The query sequence is a biological sequence. The biological sequence is a DNA sequence. In an alternative embodiment, the biological sequence is an EST. The input device is a computer with a set of software for receiving the query sequence.



The query sequence is compared with the stored representative EST in the database according to the similarity index. Further, the representative EST having similarity with the query sequence according to the similarity index is chosen. Then, the query sequence is again compared with the stored candidate ESTs of the chosen representative EST. The compared results are displayed through a display of the input device.

The work is carried out on Cotton EST sequences to verify and substantiate the results.

The invention can be used in the early detection of a trait in the field of Agricultural products, recognition of Genetically Modified traits and reduction in computationally intensive tasks of Gene prediction.



Deepfakes: The Promise and Peril of Synthetic Media

Dr. Madhuri Tasgaonkar

In the digital era, technological progress is continuously transforming our methods of interaction, communication, and information consumption. Among these developments, deepfake technology—an amalgamation of "deep learning" and "fake"—has surfaced as one of the most debated and potent tools within the field of artificial intelligence (AI). Deepfakes employ deep-learning algorithms, especially generative adversarial networks (GANs), to produce extremely lifelike images, videos, or audio that portray individuals performing actions or speaking words they never actually did. Although this technology offers considerable potential across various fields, it also presents significant ethical, social, and legal challenges.

Deepfake technology fundamentally depends on training artificial intelligence models with extensive collections of videos, images, and audio recordings to replicate individuals' voices, facial expressions, and behaviors. This process results in synthetic media that is almost indistinguishable from genuine footage. Initially created as a research tool to enhance computer vision and machine learning, deepfakes have swiftly entered mainstream use, with both positive and negative implications.

One of the most promising uses of deepfakes is in the entertainment sector, where filmmakers can employ the technology to make actors appear younger, bring historical figures back to life, and produce multilingual content without needing actors to reshoot scenes. In education and communication, deepfakes can recreate historical events or create interactive avatars for virtual classrooms. They are also increasingly utilized as accessibility tools, aiding in the creation of sign language avatars or converting text to speech in various accents and languages. However, the darker aspects of deepfakes are considerably more concerning.

This technology has been extensively misused to produce explicit non-consensual content, often targeting celebrities, political figures, and women. Political deepfakes—videos depicting public figures making false statements or engaging in unethical actions—pose a risk to elections, spread misinformation, and undermine trust in democratic institutions. The capability to create convincing fake content jeopardizes the integrity of journalism, erodes public trust, and complicates the distinction between truth and fiction in an already complex media environment.

Use of Deepfake Technology for Behaviour Management in Pediatric Dental Patients

Managing behavior is a vital component of pediatric dentistry, as children frequently feel anxious, fearful, and resistant during dental appointments. Traditional methods for managing behavior include positive reinforcement, the tell-show-do approach, distraction, voice control, and strategies involving the presence or absence of parents. Recent advancements in digital technology have paved the way for more engaging and effective patient management techniques. One such innovation is the application of deep fake technology.

At the Department of Computer Engineering, we created an app that merges augmented reality with GANs to produce a video-based deepfake. We recorded 4-5 videos of commonly performed procedures, featuring a cooperative patient and a green screen backdrop. When an anxious uncooperative patient visits a clinic, the practitioner takes a photo. Our app then swaps the face in the original video with that of the anxious patient. Additionally, the app replaces the green screen with the actual clinic background to enhance realism for the patient.

This experiment was conducted on 20 pediatric patients at the Department of Pediatric and Preventive Dentistry of D.Y. Patil Dental College and Hospital, Pune. Vital signs such as heart rate and oxygen levels were monitored before and after the experiment. The study involved patients aged 7–10 years.

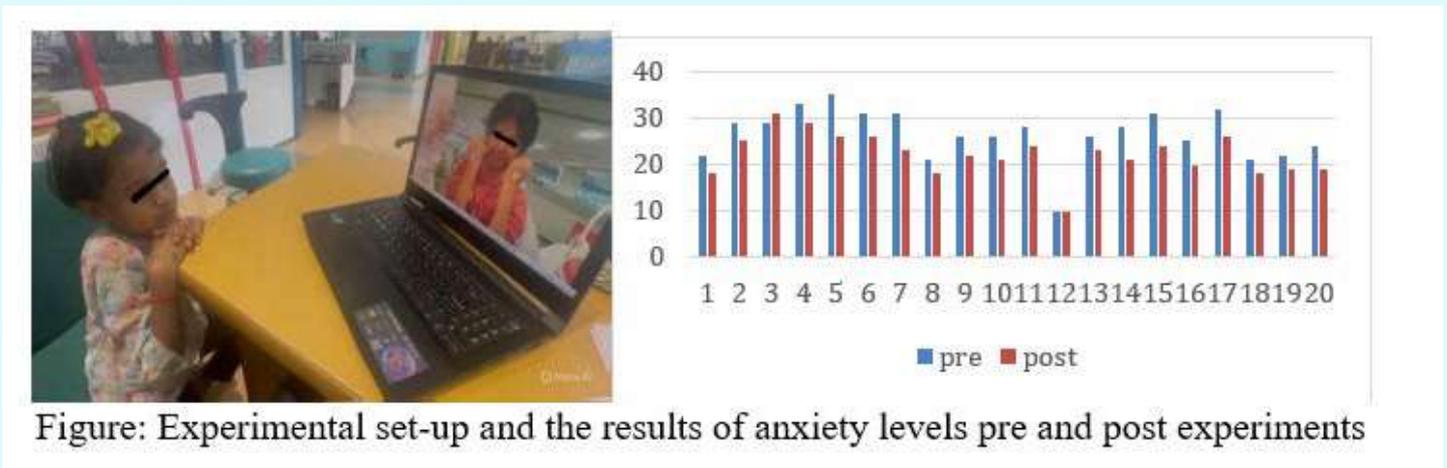


Figure: Experimental set-up and the results of anxiety levels pre and post experiments

The digital approach fostered trust, alleviated anxiety, and enhanced compliance, making dental treatments less daunting for both patients and practitioners. This is particularly crucial for children, as their fear of treatment can negatively impact oral health into adulthood. When thoughtfully crafted and ethically applied, deepfake-based tools can complement traditional behavior management techniques, enriching the pediatric dental experience.

Overall, deepfake technology illustrates the dual nature of AI, a potent innovation capable of both remarkable creativity and significant harm. This narrative underscores the practical benefits of this technology.



How to Create a Frontend and Deploy a Machine Learning Model using Flask?

Dr. Chhaya S. Gosavi

Deploying a machine learning (ML) model doesn't stop at model training. To make your model accessible to users, you need a user interface (UI) and a backend that connects the frontend to the trained model. Flask, a lightweight web framework in Python, provides a powerful way to create such applications. This article walks you through how to:

- Prepare your ML model for deployment
- Create a simple frontend using HTML/CSS
- Use Flask to connect the frontend with the model
- Run the web app locally

1. Train and Save Your Machine Learning Model

- Before deployment, you need a trained ML model. Here's an example using scikit-learn.

```
from sklearn.datasets import load_iris  
from sklearn.ensemble import RandomForestClassifier  
import pickle
```

```
# Load dataset and train model  
iris = load_iris()  
X, y = iris.data, iris.target  
model = RandomForestClassifier()  
model.fit(X, y)
```

```
# Save the model  
with open('model.pkl', 'wb') as f:  
    pickle.dump(model, f)
```

2. Create the Frontend (HTML)

Create a folder named templates/ and add a file index.html

```
<!DOCTYPE html>
<html>
<head>
  <title>Iris Predictor</title>
</head>
<body>
  <h2>Enter Iris Flower Features</h2>
  <form action="/predict" method="post">
    <label>Sepal Length:</label><input type="text" name="sepal_length"><br>
    <label>Sepal Width:</label><input type="text" name="sepal_width"><br>
    <label>Petal Length:</label><input type="text" name="petal_length"><br>
    <label>Petal Width:</label><input type="text" name="petal_width"><br>
    <input type="submit" value="Predict">
  </form>
  {% if prediction %}
  <h3>Prediction: {{ prediction }}</h3>
  {% endif %}
</body>
</html>
```

3. Build the Flask App

Create a file named app.py:

```
from flask import Flask, request, render_template
import pickle
import numpy as np

app = Flask(__name__)
model = pickle.load(open('model.pkl', 'rb'))

@app.route('/')
def home():
    return render_template('index.html')
```

```

@app.route('/predict', methods=['POST'])
def predict():
    features = [float(request.form[key]) for key in ['sepal_length', 'sepal_width',
'petal_length', 'petal_width']]
    prediction = model.predict([np.array(features)])
    target_map = {0: "Setosa", 1: "Versicolor", 2: "Virginica"}
    result = target_map[prediction[0]]
    return render_template('index.html', prediction=result)

if __name__ == '__main__':
    app.run(debug=True)

```

4. Directory Structure

```

project-folder/
├── app.py
├── model.pkl
├── templates/
└── index.html

```



5. Run the Flask App

```
$> python app.py
```

Open a browser and go to <http://127.0.0.1:5000/>. You'll see the web form where you can input data and receive predictions.

Conclusion

Deploying your machine learning model using Flask is a straightforward yet powerful way to bring your solution to end-users. Flask serves as the bridge between your trained model and a user-friendly web interface. While this example used a basic HTML form, you can easily extend the frontend using CSS, Bootstrap, or even React with Flask as a backend API



Expert Sessions by Faculty

- Dr. Sunita Jahirabadkar delivered an expert session on “Use of AI for Social Development in an Institute: SDG,” at Deepastambha in August 2024
- Prof. Pranjali Deshpande delivered a guest session on “Marathi and AI” to the students at the American Institute of Indian Studies in July 2024
- Prof. Sakshi Mandke delivered a session on “High Performance Computing” at JSPM’s Rajarshi Shahu College of Engineering in July 2024
- Dr. Chhaya Gosavi delivered an expert session on “Innovative Practices in Teaching (Pedagogy Session)” at the Computer Department, Cummins College of Engineering for Women, Pune
- Dr. Chhaya Gosavi was a speaker on “Autonomy Awareness” at PCCOER, Ravet, Pune, in August 2024
- Dr. Shilpa S. Deshpande was the speaker for a guest session on “Literature Review,” organized for MCA and MSc students at MKSSS’s K. B. Joshi Institute of Information Technology, Pune

- Prof. Hitendra Khairnar conducted a PRE-NAAC Orientation session under the “Paris Sparsh Yojana” by SPPU at Trinity College of Arts, Commerce and Science in February 2025
- Prof. Sakshi Mandke delivered a keynote session in the Awareness Program on “High Performance Computing” under AICTE SANKALP at MKSSS’s BCA College, Wai, on 26th September 2024
- Dr. Madhuri Tasgaonkar delivered a session at the National Level Seminar on “Exploring the Potential of AI: Ideas and Innovation for Shaping the Future” held at MKSSS’s K. B. Joshi Institute of Information Technology, Pune in March 2025.



Faculty as Resource Person

- Dr. Chhaya Gosavi served as an Organizing Committee Member and Reviewer for the Workshop at Al-Zaytoonah University of Jordan, Amman, Jordan, on 5th June 2024.
- Mr. Hitendra Khairnar contributed as a Reviewer for OTCON 3.0 held at OP Jindal University, Raigad, from 5th to 7th June 2024.
- Prof. Nutan Deshmukh was a Reviewer for Self-Learning Material (SLM) at Bharati Vidyapeeth on 7th June 2024.
- Dr. Sheetal Barekar worked as a Reviewer for the International Conference on Recent Trends in Engineering and Technology (RTET-2K24) organized by MMCOE, Pune, on 8th June 2024.
- Dr. Sheetal Barekar also served as a Reviewer for the International Journal of Electronics in June 2024.
- Dr. Chhaya Gosavi served as a Reviewer for the Self-Learning Material (SLM) on BCA Java Programming at Bharati Vidyapeeth (Deemed to be University), Centre for Distance and Online Education, on 8th June 2024.



Faculty as Resource Person

- Dr. Shilpa S. Deshpande served as a Reviewer for the Self-Learning Material (SLM) on Software Design Patterns for the MCA Program at Bharati Vidyapeeth (Deemed to be University), Centre for Distance and Online Education in June 2024
- Dr. Sandhya Arora acted as a Reviewer in the Journal of Computer Technology & Applications in 2024
- Dr. Madhuri Tasgaonkar and Mr. Hitendra Khairnar served as Coaches for the AI Youth Program organized by Dell Technologies in July 2024
- Dr. Sandhya Arora has been appointed as an Editorial Board Member of Intelligent Systems & Robotic Mechanics for the tenure in July 2024 Global Science Publishing.
- Dr. Supriya Kelkar served as an NBA Expert Evaluator for NBA
- Dr. Sandhya Arora served as an Expert Panel Member at MIT ADT University in August 2024
- Prof. Ashwini Rajurkar served as a Reviewer for ICASCA-2025 held at GLS University, India in February 2025

Faculty as Resource Person

- Prof. Aparna Hajare and Dr. Sushila Shelke acted as Reviewers for the 8th International Conference on Computing, Communication, Control and Automation (ICCUBEA-24) held at PCCOE, Pune on in August 2024
- Dr. Sandhya Arora and Dr. Chhaya Gosavi served as Reviewers for the ICDEC 2024 conference held at Erciyes University, Talas, Kayseri, Turkey, in September 2024
- Dr. Shilpa S. Deshpande served as a Reviewer for the 3rd IEEE International Conference on Blockchain and Distributed Systems Security (ICBDS 2024) held at VIIT, Pune in October 2024
- Dr. Sandhya Arora served as the Session Chair for the 5th International Conference on Frontiers in Computing and Systems (COMSYS-2024) held at COMPSYS, Goa in December 2024
- Dr. Supriya Kelkar served as a Reviewer for IEEE Transactions on Education in May 2025

Faculty as Resource Person

- Dr. Neeta Maitre participated in the 4th International Conference on Advanced Network Technologies and Intelligent Computing (ANTIC-2024) held at Banaras Hindu University, Varanasi in December 2024
- Dr. Sandhya Arora served as a Reviewer for the 2nd IEEE International Conference on Artificial Intelligence and Quantum Computation Based Sensor Applications (ICAIQSA-2024) held at GH Raisoni, Nagpur in December 2024
- Dr. Sandhya Arora served as a Reviewer for the International Conference on Research and Innovative Perspectives in Engineering (IC-RIPE 2025) held at Government College of Engineering, Nagpur in January 2025
- Prof. Varsha Pimprale served as a Reviewer for the International Conference on Advances in Computing, Control and Telecommunication Technologies (Phase-1) (ICACT-2025) held at YCCE, Nagpur in 2025
- Dr. Supriya Kelkar served as the Session Coordinator for the 1st IEEE International Conference on AIML Applications for Engineering and Technology (ICAET-25) held offline at the CCEW Campus, Pune in January 2025

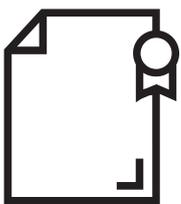
Faculty as Resource Person

- Dr. Shilpa Deshpande, Dr. Madhuri Tasgaonkar, Sakshi Mandke & Prof. Varsha Pimprale served as a Reviewer for the 1st IEEE International Conference on AIML Applications for Engineering and Technology (ICAET-25) held at MKSSS's Cummins College of Engineering for Women, Pune in January 2025
- Dr. Neeta Maitre served as a Reviewer for the 2025 IEEE International Conference on Contemporary Computing and Communications held at Christ University, Bangalore in March 2025
- Dr. Sandhya Arora served as the Session Chair for the National Conference on Recent Advances in Computer Engineering (RACE) 2025 held at Wadia College of Engineering, Pune on in April 2025
- Dr. Shilpa S. Deshpande served as a Reviewer, invited by Wiley Publishing, to review the Table of Contents of the popular book on Cyber Security by the renowned author Nina Godbole in 2025
- Dr. Shilpa S. Deshpande served as a Judge for HACK-O-HIRE-2025, a hackathon organized by Barclays, held online in April 2025

Patents



- Prof. Sakshi Mandke, Kimaya Badhe, Kanchan Salorkar, Neha Chaudhari, Samruddhi Kanhed & Dr. Karandikar received a patent grant for the system titled “Individual Identification Based on Eye-Tracking and Methods Thereof” in October 2024.
- Dr. Sandhya Arora and Prof. Nutan Deshmukh filed a patent for the System and Method for “Personalised Glucose Monitoring in Glucometers” in 2025



DID YOU KNOW?

The First Computer Programmer Was a Woman
Ada Lovelace, in the year 1800, wrote the world's first algorithm—over a century before computers even existed.

The computer that landed Apollo 11 on the moon had less processing power than a modern calculator or smartwatch!

The term "bug" in computing came from a real moth found in a computer in 1947 that caused a malfunction!

FUN FACTS



In 1980, IBM's 1GB hard disk was the size of a refrigerator and cost \$40,000. Today, you carry 100x that in your pocket.

The legendary "404" came from a room at CERN where web requests that couldn't be found were first processed.

From Android phones to smart TVs, airplanes to stock exchanges—over 96% of the top 1 million servers run Linux.



Faculty Research Publications

- Dr. Sandhya Arora presented a paper “Synthetic Image Generation using StackGan” at ASIANCON under IEEE Bombay Section held from 23rd to 25th August 2024
- Prof. Sushila Shelke and Prof. Neeta Maitre published their research article “Optimizing the thermal performance of phase change materials in building applications using deep reinforcement learning and Bayesian optimization” in the journal Thermal Science and Engineering Progress, October 2024, Vol-55
- Dr. Sandhya Arora presented a paper, “Target-Aware Generative Adversarial Network for Domain Adaptive Yolo in Cross Weather” at ICIoTCT 2024 organized by the National Institute of Technology, Mizoram, Aizawl, on 27th–28th September 2024
- Dr. Sandhya Arora published article “Novel entropy-based style transfer of the object in the content image using deep learning” in the journal Bulletin of Electrical Engineering and Informatics, October 2024
- Meenal Kamlakar presented the paper “Non Invasive Stress Detection in Pregnant Women: A Smart IoT Based System” at the 7th IEEE International Conference PUNECON 2024, held from 13th to 15th December 2024.

- Dr. Sandhya Arora presented research “Accessible Intelligence: Deep Learning-Driven Voice Assistant Interface for Diverse Disabilities” at the International Conference on Data Mining and Information Security (ICDMIS 2024) on 7th–8th October 2024
- Prof. Jyoti L. Bangare, Prof. Nilofer Kittad, and Prof. Sarika N. Joglekar published paper “Machine Learning-Based Breast Cancer Detection Using Histopathological Images” in *Frontiers in Health Informatics*, Vol. 13, No. 2, 2024 (10th July 2024)
- Prof. Nilofer Kittad, Prof. Jyoti L. Bangare, and Prof. Sulakshana Nagpurkar published article “Leveraging Deep Learning for Early Detection and Classification of Parkinson's Disease” in *Frontiers in Health Informatics*, 2024, Vol. 13, Issue 2 (ISSN-Online: 2676-7104)
- Prof. Meenal Kamlakar also presented the paper “Early Identification of Nutritional Gaps in Pregnant Women Using Nail Images for Healthcare Analysis” at the 7th IEEE International Conference PUNECON 2024, held from 13th to 15th December 2024
- Dr. Ashwini Rajurkar, Prof. Nilofer Kittad, and Prof. Sulakshana Nagpurkar presented paper “Establish an Innovative ML-enabled Human Activity Recognition through Edge Computing” at the 7th IEEE International Conference PUNECON 2024, held from 13th to 15th December 2024

- Dr. Chhaya Gosavi presented paper “Machine Learning for Early Dementia Detection Integrating Clinical Data and MRI Imaging” at the 7th IEEE International Conference PUNECON 2024, conducted from 13th to 15th December 2024
- Dr. Sandhya Arora published article “Devanagari Character Recognition: A Comprehensive Literature Review” in IEEE Access, January 2025
- Prof. Nilofer Kittad presented the paper “A Holistic Survey on Early Detection of Autism Spectrum Disorder” at the 3rd International Conference on Automation, Computing and Renewable Systems (ICACRS 2024), held on 5th–6th December 2024
- Dr. Sandhya Arora, Prof. Varsha Pimprale, and Prof. Nutan Deshmukh presented their paper “Analysis of Metaheuristic Optimization Algorithms for Solving Vehicle Routing Problem with Time Windows” at the 1st IEEE International Conference on AIML-Applications for Engineering & Technology (ICAET 2025), organized by CCEW, Pune, on 16th–17th January 2025
- Prof. Varsha Pimprale, Dr. Sandhya Arora, and Prof. Nutan Deshmukh published their paper “Early Prediction of Critical Diseases Using Machine Learning and Image Processing” in the African Journal of Biomedical Research on 1st September 2024
- Prof. Varsha Pimprale and Prof. Sakshi Mandke, along with students, presented the paper “Customer Relationship Management (CRM) System with AI Integration for Industrial Safety” at the International Conference on Advances in Computing, Control & Telecommunication Technologies – ACT 2025 (Phase I), held on 7th–8th February 2025

- Dr. Sunita Jahirabadkar published article “Intellectual Fertilizer Prediction System for Precision Agriculture Using Optimized Artificial Networks” in the Journal of Information Systems Engineering and Management, February 2025
- Dr. Sunita Jahirabadkar also presented paper “Deep Learning Methods for Fertilizer Forecasting: Review of State of The Art” at the 2024 International Conference on Intelligent Systems and Advanced Applications (ICISAA 2024) on 25th October 2024.
- Prof. Varsha Pimprale, Dr. Sandhya Arora, and Prof. Nutan Deshmukh published research paper “Early Prediction of Critical Diseases Using Machine Learning and Image Processing” in the African Journal of Biomedical Research on 1st September 2024.
- Prof. Varsha Pimprale and Prof. Sakshi Mandke, along with students, presented paper “Customer Relationship Management (CRM) System with AI Integration for Industrial Safety” at the International Conference on Advances in Computing, Control & Telecommunication Technologies – ACT 2025 (Phase I), held on 7th–8th February 2025.
- Dr. Sunita Jahirabadkar published her article “Intellectual Fertilizer Prediction System for Precision Agriculture Using Optimized Artificial Networks” in the Journal of Information Systems Engineering and Management in February 2025.
- Dr. Sunita Jahirabadkar also presented paper “Deep Learning Methods for Fertilizer Forecasting: Review of State of The Art” at the 2024 International Conference on Intelligent Systems and Advanced Applications (ICISAA 2024) on 25th October 2024.

- Prof. Sakshi Mandke, along with a student, presented the paper “A Comparative Survey of Text Summarization for Indian Language” at the 1st IEEE International Conference on AIML-Applications for Engineering & Technology (ICAET 2025), organized by CCEW, Pune, on 16th–17th January 2025.
- Dr. Mahendra Deore and Dr. Chhaya Gosavi presented paper “Detection and Prevention of Various Network Attacks Using Soft Computing Approaches: An Overview” at the 1st IEEE International Conference on AIML-Applications for Engineering & Technology (ICAET 2025), organized by CCEW, Pune, on 16th–17th January 2025
- Dr. Mahendra Deore presented research paper “Leveraging LSTM Networks for SPAM Detection in Real-Time Chat Messages” at the same conference, ICAET 2025, on 16th–17th January 2025
- Dr. Sunita Jahirabadkar presented paper “Stress Analysis of Ashwagandha, a Medicinal Plant, Using Thermal Imaging” at the 1st IEEE International Conference on AIML-Applications for Engineering & Technology (ICAET 2025) on 16th–17th January 2025

- Dr. Sushila Shelke published paper “Improved Employee Bee Algorithm for Team Formation” in *Evolving Systems*, Volume 16, Page 57, on 29th April 2025
- Dr. Mahendra Deore published research article “Machine Learning Based Agricultural Profitability Recommendation Systems: A Paradigm Shift in Crop Cultivation” in the *International Journal of Interactive Multimedia and Artificial Intelligence* on 30th October 2024
- Dr. Supriya Kelkar published paper “Lip2Voice: A Sequence-to-Sequence Visual Speech Recognition System for Predicting Speech from Silent Video Inputs” in the *International Journal of Advanced Technology and Engineering Exploration (IJATEE)* in December 2024
- Dr. Supriya Kelkar also presented two papers — “Evaluation Performance of Apriori, Apriori TID and FP-Growth Algorithms: A Comparison on Diverse Datasets” and “Prodata: A Python Library for Simplifying Manual Data Preprocessing” — at the 1st IEEE International Conference on AIML-Applications for Engineering & Technology (ICAET 2025), organized by CCEW, Pune, on 16th–17th January 2025



Faculty Books/Book Chapter Publications



- Dr. Chhaya Gosavi and Dr. Sandhya Arora authored the book chapter “Artificial Intelligence, Machine Learning and User Interface Design”, published by Bentham Science Publishers in September 2024 (ISBN: 978-981517960-6, 978-981517961-3, Scopus Indexed)
- Dr. Anjali Naik co-authored the book “Entrepreneurship Journey from Idea to Startup”, published by Techknowledge Publications in October 2024 (ISBN: 978-93-5563-837-3).
- Dr. Neeta Maitre contributed the book chapter “Agricultural Biomass for the Synthesis of Value-Added Materials (Chapter 20)” in the book Agro Biomass Valorization through a Sustainability Prism, published by Taylor and Francis Group in November 2024 (eBook ISBN: 9781003407713)
- Dr. Chhaya Gosavi authored the book “Interactive Media with Next-Gen Technologies and Their Usability Evaluation”, published by Chapman and Hall/CRC in November 2024 (eBook ISBN: 9781032664828)
- Dr. Chhaya Gosavi contributed a chapter titled “ICTs for Information and Communication Portray a Revolution in Education” in the book Interactive Media with Next-Gen Technologies and Their Usability Evaluation, published by Chapman and Hall/CRC, 1st Edition, November 2024 (eBook ISBN: 9781032664828)
- Dr. Chhaya Gosavi and Madhuri Tasgaonkar co-authored the chapter “e-Learning Adoption Model: A Literature Review” in the same book Interactive Media with Next-Gen Technologies and Their Usability Evaluation, published by Chapman and Hall/CRC, 1st Edition, November 2024 (eBook ISBN: 9781032664828)





Workshops Arranged



- Prof. Sarika Joglekar coordinated a workshop on “Android Development for TY Students”, conducted by Mr. Prasad Tasgaonkar, Task Compusys, Pune.
- Dr. Sandhya Arora coordinated an ISTE Approved Short Term Training Program (STTP) on “Navigating the Digital Era Through Generative AI and Prompt Engineering”, with expert sessions delivered by Dr. Bhushan Garware (Google), Dr. Mansi Patwardhan (TCS), Dr. Rahee Walamble (SIT), Mr. Ashutosh Dongaonkar (Consultant), Prof. Ashwini Kumar (CVR COE), and Mr. Upendra Kumar Tiwari (Data Scientist)
- Dr. Anjali Naik and Dr. Sushila Shelke coordinated a “Hands-on Workshop on Advanced Deep Learning” conducted by Dr. Bhushan Garware and Dr. Tushar Kute.

Industry visit at SAS



Industry visit at SAS



Expert Sessions Organized 2024-25



- An Expert Session on “Challenges and Opportunities in Artificial Intelligence (AI) Agents” was delivered by Dr. Bhushan Garware, Sr. Data Scientist, Google, Pune, coordinated by Prof. Varsha Pimprale.
- An Expert session on “Evolutionary Algorithms” was conducted by Mr. Pratik Patil, Senior Software Engineer at Turtlemint, coordinated by Prof. Aparna Hajare and Prof. H.S. Khairnar.
- An Expert Session on “Applications of Statistics and Probability” was delivered by Dr. Susmita Bhambure, Assistant Professor, Dept. of Computer Science, S.P. College, Pune, coordinated by Prof. Aparna Hajare and Prof. H.S. Khairnar.
- An Expert Session on “Cache Memory Organization” was delivered by Prof. Pooja Deshmukh, Sr. Software Engineer at Dominance Technology Pvt. Ltd., coordinated by Dr. Ashwini Rajurkar and Prof. Shilpa Pant.
- An Expert Session on “JDBC and Hibernate” was delivered by Ms. Muskan Nechlani, Software Developer, coordinated by Prof. Vaishali Salgar and Ms. Purnima Kawale.
- An Expert Session on “Advanced Techniques in Association Rule Mining” was conducted by Dr. Sandip Shingade, Assistant Professor, VJTI, Mumbai, coordinated by Dr. Sushila Shingade.
- An Expert Session on “Agile Software Development and Project Planning” was delivered by Prof. Gazala Sayyed, Director, Evolent, coordinated by Ms. Jyoti Bangare, Prof. Nilofer Kittad, and Dr. Ashwini Rajurkar.

- An expert session on “Enterprise Information System Trends, Tools, and Technologies” was conducted by Mr. Rahul Pawade, Director – Product Solutions at ZingHR, Mumbai, coordinated by Dr. Neeta Maitre, Prof. Sulakshana Nagpurkar, and Prof. Varsha Pimprale
- Prof. Namrata Pashankar, Director at Pashankar Tours, delivered a session on “Entrepreneurship Development”, coordinated by Prof. Rakhi Dongaonkar, Prof. Meenal Kamlakar, and Prof. Sarika Joglekar
- An Expert Session on “Art and Aesthetic of Design” was conducted by Prof. Mrunal Bhongale, Senior Specialist – Design at Cybage Software Pvt. Ltd., coordinated by Prof. Nilofer Kittad and Dr. Chhaya Gosavi.
- Dr. Manasi Patwardhan, Senior Scientist in the Deep Learning and AI Research Area at TCS Research Centre, delivered a session on “The Transformer Architecture and Its Applications”, coordinated by Dr. Anjali Naik, Dr. Sushila Shingade, Dr. Sandhya Arora, and Prof. Pranjali Deshpande

- Dr. Latesh Malik, HOD of Computer Engineering at Government Engineering College, Nagpur, delivered a session on “Bio-Inspired Computing”, coordinated by Dr. Sandhya Arora.
- A session on “Launching an e-Business Website” was conducted by Ms. Disha Bhoje, Full Stack Engineer at BNY, coordinated by Prof. Rakhi Dongaonkar.
- Mr. Mihir Deshpande, DevOps Consultant at Siemens, conducted a session on “Terraform & DevSecOps”, coordinated by Prof. Prakash Date and Prof. Purnima Kawale
- A session on “Exploration of IBM Cloud” was delivered by Mr. Yogesh Raje, Manager and Subject Matter Expert (SME) at Connecting Dreams Foundation (CDF), coordinated by Prof. Sanjivani Mane, Prof. Sulakshana Nagpurkar, and Prof. Sarika Joglekar.
- Mr. Pratik Patil, Senior Software Engineer at Turtlemint, conducted a session on “Blockchain Frameworks and Smart Contracts”, coordinated by Prof. Aparna Hajare
- A session on “File Protection & Security” was conducted by Ms. Mrunmayee Manmadkar, Software Development Engineer at Barclays, coordinated by Dr. Chhaya Gosavi, Prof. Vaishali Salgar, and Prof. Aparna Hajare.

- A session on “Big Data: Introduction and Challenges” was delivered by Mr. Vikram Gokhale, Manager, Emergys Solutions Private Limited, and coordinated by Prof. Sakshi S. Mandke, Dr. Sushila Shelke, Prof. Jyoti Bangare, and Dr. Mahendra Deore
- Mr. Atul Kahate, Computer Science Trainer at C-DAC, conducted a session on “SQL Injection and Cross-Site Scripting”, coordinated by Dr. Mahendra Deore, Nutan Deshmukh, and Priya Deokar
- A session on “ICCF” was conducted by Prof. Pradnya Kashikar, Cyber Security Tools Freelancer, with coordination by Prof. Priya Deokar and Prof. Meenal Kamlakar.
- Dr. Neeta Maitre coordinated a session on “Green Computing”, delivered by Dr. Vivekanand
- A session on “Pattern Recognition and Recommendation Systems” was presented by Asmita Jadhav and Tanvi Kasande, Software Engineers at Salesforce, Hyderabad, coordinated by Prof. Varsha Pimprale
- Dr. Ambar Gadkari, Developer at HCL Technologies, Sweden, delivered a session on “Embedded Software for Autonomous Cars”, coordinated by Dr. Sheetal Barekar and Prof. Nutan Deshmukh
- A session on “Application Layer Security, Firewall, Kerberos v4, and Wireless Security” was delivered by Prof. Swati Jadhav, Assistant Professor, VIT, Pune, and coordinated by Dr. Mahendra Deore, Prof. Nutan Deshmukh, and Prof. Priya Deokar

- A session on “DBScan – Big Data Perspective” was conducted by Ms. Sakshi Nalawade, Software Developer at Citi Bank, coordinated by Sakshi Mandke, Dr. Sunita Jahirabadkar, Dr. Sushila Shelke, Prof. Jyoti Bangare, and Dr. Mahendra Deore
- Dr. Sandip Shingade, Assistant Professor at VJTI, Mumbai, delivered a session on “Computability Theory for Turing Machines”, coordinated by Dr. Ashwini Rajurkar, Prof. Gitanjali Salunkhe, and Prof. Jyoti Kengale
- A session on “Introduction to Internet of Things and Its Applications” was conducted by Ms. Rucha Limaye, Associate Engineer at Eaton Innovation Center, coordinated by Dr. Sheetal Barekar and Prof. Nutan Deshmukh

CSI Student Chapter Events 2024-25



- The Advanced Deep Learning Workshop was organized by the CSI Student Branch and ACM Student Chapter, CCEW on 21st and 24th February 2025, featuring renowned industry experts, with active participation from 162 students and faculty members.
- An Expert Talk on “Writing Code Effectively with GenAI Tools” was conducted on 15th February 2025 in association with Persistent Systems, delivered by Dr. Vijay Kumar, and attended by 50 students.



ACM Events 2024-25

- The Code IT coding competition, conducted on 28th September 2024 as a regional event, engaged First Year, SY, and TY students from different colleges and branches, with close to 170 participants
- The Scriptum Ignitus blog writing competition was held from 9th to 18th November 2024 as a regional event open to all colleges and branches, with 34 student submissions from First Year, SY, and TY students
- The Advanced Deep Learning Workshop was conducted on 21st February, 28th February, and 7th March 2025 as a regional event open to all colleges and branches, with the participation of approximately 156 students
- The AxiomIVE Ideathon Competition was organized from 11th to 19th March 2025 as a regional event for First Year and Second Year students across all colleges and branches, engaging approximately 143 participants

Echo Team 2024-25



Dr. Sunita Jahirabadkar (HOD)

Faculty Co-ordinator

1. Dr. Ashwini Rajurkar
2. Prof. Sakshi Mandke

Students Panel

1. Ananya Shroff
2. Sanika Deokule
3. Shruti Srinivasan
4. Anushka Mamane
5. Snehal Jagtap