

Hello World!

“From IDEs to Ideas”

Computer Engineering
Department Magazine

Release Notes v2024.25

Thadomal Shahani Engineering College

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01 ABOUT DEPARTMENT



The computer engineering department of Thadomal Shahani Engineering College was established in the year 1984 and has grown over the years into a competent department with state of the art computing facilities and a dedicated faculty. The goal of the department is to establish state of the art computing environment to develop competent computer engineers imbued with the spirit of professionalism and responsible citizenship. The department emphasizes the vision of the Thadomal Shahani Engineering College for excellence in education. Highly qualified, dedicated faculty and good infrastructure facilities make this dream realizable.

The Department has continuously upgraded the infrastructure according to the changing needs of technological environment. The Department has a rich infrastructure with more than 300 branded machines of latest configuration. Internet browsing facility with lease-line connectivity of 4 Mbps is provided and is made accessible to the students, around the clock for 24 hours. All the labs in the department have internet browsing facility. Good Interaction with the Industries is maintained so that the students also have better exposure to the professional environment and its needs. This also helps in bridging the gap between the academics and Industry requirements so that our students have preference in Industrial arena. In order to keep up the cutting edge technologies, department has a digital library facility with reputed International and National Journals like IEEE, science direct etc.

The students are focused with the use of conceptual understanding of core domain areas in computing as well as enhanced programming skills disseminating their analytical abilities. Our aim is to provide our students the lifelong learning and leadership skills that enable them to grow in their professions and advance to positions of responsibility by effective Industry-Institute Interaction. The Department has an excellent placement record and the students are placed in prestigious software industries all over the world.

The Department has been pioneered as the first Post Graduate Department in Computer Engineering in the unaided Engineering Colleges in University of Mumbai. There was no facility for post graduation for Computer Engineering graduates in the non-aided sector till 2001. This void was filled by our M.E course after persistent efforts in that direction by our Computer Engineering Department. The first batch of M.E. was inducted in August 2001 with an intake capacity of 25. The department has also started PhD. with an intake of 10 students from the academic year 2014-15.

VISION

Metamorphosis into a center of excellence in higher education and enterprise computing to nurture and facilitate the learners who ought to be the creams of society in terms of their irresistible ambition to be part of entities inventing breakthrough technologies to further the cause of mankind through emerging technologies.

MISSION

Building state of art laboratories with the help of internal accruals / government funding / industry funding.

Collaborative research initiative with premier research organizations in the country.

Subjecting and initiating learners to entrepreneurship training program and nascent technologies which shall be beyond curriculum.

Developing instructional content leveraging new findings of cognitive load theories and visual learning.

Initiating public-private partnership to setup startup ventures to help learners evolve as entrepreneurs in ICT.

Extensively promote participation in application building competition organized externally and internally to enable learner to apply theoretical understanding in real time functional area.



02 WORD FROM PRINCIPAL



Dr. G.T. Thampi

ABOUT

Dr. G. T. Thampi, the distinguished Principal of Thadomal Shahani Engineering College, Bandra, Mumbai, brings over 34 years of experience and a PhD to his role. A visionary in tech research and education, he mentors 20 PhD scholars, has over 85 publications, and is at the forefront of reengineering engineering education for the modern era

Embracing the Agentic Future

The field of computer engineering is rapidly changing, particularly with the emergence of Agentic RAG. This technology combines Retrieval Augmented Generation (RAG) with autonomous AI agents. This allows systems to retrieve and process information. It also enables them to reason, plan, and act independently.

Traditional RAG systems enhance large language models (LLMs) by giving them access to external knowledge bases. This helps to ground responses in factual information. Agentic RAG integrates AI agents within the RAG pipeline. These agents manage the retrieval and generation process. They can analyze queries, develop retrieval strategies, validate information, and refine responses dynamically.

This shift has implications for computer engineers. The focus is no longer solely on building algorithms that process data passively. Instead, the focus is on creating intelligent systems that behave like proactive problem-solvers. These systems can navigate complex, real-world tasks with minimal human intervention.

Startup Opportunities: Unleashing Autonomous AI Agents in 3 Use Cases

Agentic RAG creates opportunities for startups specializing in autonomous AI agent development. Here are three potential use cases:

- **Intelligent Virtual Assistants for Specialized Industries:** Consider an AI agent for the legal industry. It could analyze legal documents, identify precedents, draft legal arguments, and summarize key findings, as described by LeewayHertz - AI Development Company. Alternatively, an agent for healthcare professionals could analyze patient records, reference research, and suggest treatment plans. Startups could develop these specialized assistants. They could use data sets and domain expertise to build a competitive advantage.
- **Autonomous Workflow Automation for Enterprises:** Many businesses struggle to manage unstructured data and streamline workflows across departments. Startups could develop Agentic RAG solutions that act as workflow orchestrators. These agents could route tasks, prioritize actions, analyze market trends, and generate reports. This could lead to efficiency gains, according to Wizr AI.
- **Personalized Learning and Development Platforms:** AI agents can create personalized learning experiences in the education sector. Startups could build platforms where Agentic RAG systems analyze student progress and identify learning gaps. The agents could adapt teaching strategies, providing feedback and recommendations, optimizing learning outcomes, and making education more accessible.

The possibilities with Agentic RAG are significant. By focusing on real-world problems and autonomous AI agents, computer engineers can shape a future where AI collaborates, driving innovation across various industries.

03 MAGAZINE TEAM



Dr. Tanuja K. Sarode



Dr. Nabanita Mandal



Dr. Juhi Janjua



Ms. Parul Jain



Ms. Siddhi Mehta

Ms. Annesha Teckchandani



Mr. Gauresh Bagayatkar

04 TEACHING STAFF



Dr. Tanuja K. Sarode

Designation: Head of Department and Professor

Qualification: Ph.D (Engineering)

Experience: 24+ years

Area of specialization: Image Processing, Machine Learning, Soft Computing

Email: tanuja.sarode@thadomal.org

Dr. Archana Bhupendra Patankar

Designation: Professor

Qualification: Ph.D. (Engineering)

Experience: 25+ Years

Area of specialization: Image Processing, Algorithms, Security

Systems, Data Science, Blockchain, Computer Graphics. Artificial Intelligence

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Dr. Jayant Gadge

Designation: Vice Principal and Professor

Qualification: Ph.D (Engineering)

Experience: 23+ Years teaching, 4 years Industry

Area of specialization: Web Mining , Data Mining, Information Retrieval, Networking

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Dr. Shilpa Verma

Designation: Associate Professor

Qualification: Ph.D. (Engineering)

Experience: 23+ years

Area of specialization: Artificial Intelligence, Object Oriented Technology, Software Engineering, Management Information Systems, Project Management

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Dr. Anil Z. Chhangani

Designation: Associate Professor

Qualification: Ph.D. (Engineering), M.B.A. (Marketing)

Experience: 25+ years

Area of specialization: Data Mining, Image Processing, Digital Forensics Machine Learning

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Dr. Seema Lingaraj Kolkur

Designation: Associate Professor, Dean PhD Program and Dean Internship Program

Qualification: Ph.D. (Engineering)

Experience: 25 Years

Area of specialization: Artificial Intelligence, Generative AI, Data Science, Database Systems

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Dr. Arti Deshpande

Designation: Associate Professor

Qualification: Ph.D. (Computer Science Engineering),
ME(Computer Engineering),BE(Computer Technology)

Experience: 26 Years

Area of specialization: Artificial Intelligence, Data Mining,
Data Warehousing, Machine Learning, System Security,
Cryptography

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Dr. Gauri Shukla

Designation: Associate Professor, Program officer (NSS-TSEC)

Qualification: Ph.D. (Engineering)

Experience: 23 + years

Area of specialization: Microprocessor, Object Oriented
Programming, Computer networks, Python Programming

Email: gauri.shukla@thadomal.org



Dr. Tasneem Mirza

Designation: Associate Professor and Controller of Examination

Qualification: Ph.D. (Engineering)

Experience: 24+ Years

Area of specialization: Software Engineering, Computers
organization, Distributed computing

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Ms. Sakshi Manoj Surve

Designation: Assistant Professor

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Experience: 24+ Years

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Dr. Ujwala H. Bharambe

Designation: Assistant Professor

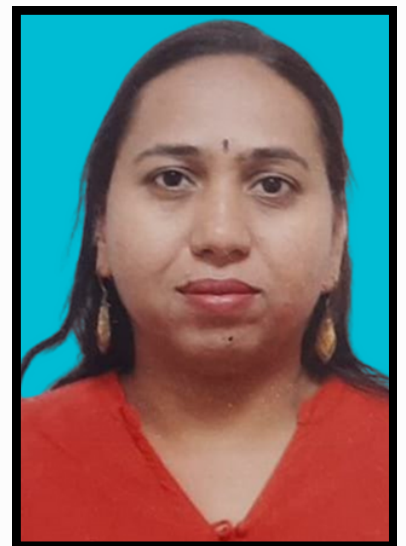
Qualification: Ph.D. (IIT Bombay)

Experience: 22+ Years

Area of specialization: Artificial Intelligence, Natural Language Processing Optimization, Predictive analytics, Semantic

Processing, Geospatial Analytics.

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Ms. Anagha Durugkar

Designation: Assistant Professor

Qualification: Pursuing PhD (Computer Engineering) M.E. computer science

Experience: 24+ Years

Area of specialization: Big Data, Data mining, mobile computing, database security, Machine Learning, Social media analytics, Artificial Intelligence

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Ms. Sonal Shroff

Designation: Assistant Professor

Qualification: M.E. (Computer Engineering)

Experience: 24+ Years

Area of specialization: Satellite Image Processing, Data compression, Artificial Intelligence, Machine Learning, Computer Graphics

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Ms. Vaishali Suryawanshi

Designation: Assistant Professor

Qualification: Ph.D. (Pursuing) M.E. Computer

Experience: 20+ years

Area of specialization: Deep Learning, Machine Learning, Artificial Intelligence, Computer Vision, Algorithms

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Ms. Manisha Prakash Dumbre

Designation: Assistant Professor

Qualification: Pursuing PhD (Computer Engineering)
M.E. (Computer Engineering)

Experience: 18+ years

Area of specialization: Theoretical Computer science, Data Structure, Operating System, Computer Graphics, Cloud Computing, Microprocessor, C programming, JAVA

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Ms. Rupali Sanjay Sarode

Designation: Assistant Professor

Qualification: Pursuing PhD (Computer Engineering)
M.E (Computer Engineering)

Experience: 18 years

Area of specialization: Programming Languages C, JAVA,
Operating System

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Ms. Vijaya Padmadas

Designation: Assistant Professor

Qualification: Pursuing PhD , M.E Computer Engineering

Experience: 23+ years

Area of specialization: Database systems, Data mining,
Semantic web, Computer Networks, Data science, Natural
language processing

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Mr. Aejaaz Khan

Designation: Assistant Professor

Qualification: M.S. (Computers)

Experience: 10+ years teaching, 17 years IT industry

Area of specialization: Web apps, OO design, User
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Management.

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Mr. Rithesh Kini

Designation: Assistant Professor

Qualification: M.Tech (IIT-B)

Experience: 21+ years

Area of specialization: Digital Image Processing, Microprocessor, Microcontrollers & Embedded Systems, C Programming, Object Oriented Programming

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Dr. Nabanita Mandal

Designation: Assistant Professor

Qualification: PhD, M.E (Computer Engineering)

Experience: 11+ years

Area of specialization: Machine Learning, Deep Learning, Blockchain, System Security, Algorithms

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Ms. Darakhshan R. Khan

Designation: Assistant Professor

Qualification: PhD (pursuing), M.E (Computer Engineering)

Experience: 10+ Years

Area of specialization: Deep Learning, Machine Learning, Time Series Analysis, Data Structure, Algorithms, Python Programming

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Dr. Juhi Janjua

Designation: Assistant Professor

Qualification: PhD, M.E (Computer Engineering)

Experience: 9+ years

Area of specialization: Deep Learning, Machine Learning, Data Mining, Data Structures, Programming

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Mr. Vaibhav Ambhire

Designation: Assistant Professor

Qualification: M.E. (Computer Engineering),
PhD Pursuing(Computer Engineering)

Experience: 13+ years

Area of specialization: C Programming, Data Structures and Algorithm, Python, Theory of Computer Science, Operating System, System Programming & Compiler Construction, Digital logics,

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Ms. Shilpa Ingoley.

Designation: Assistant Professor

Qualification: Pursuing PhD (Computer Engineering), M.E (Computer Engineering)

Experience: 24+ years

Area of specialization: Computer network, Operating System OOPM, Soft Computing, Database Management System, Cloud Computing Machine Learning, Deep Learning,

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Ms. Parul Jain

Designation: Assistant Professor

Qualification: M.E. (Computer Engineering),
PhD Pursuing(Computer Engineering)

Experience: 10 years

Area of specialization: Operating Systems, Discrete Mathematics, Artificial Intelligence, Mobile Computing, Large Language Modeling.

Email: parul.jain@thadomal.org

Ms. Sonali Jadhav

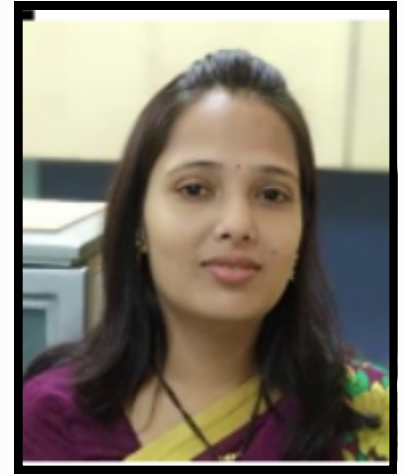
Designation: Assistant Professor

Qualification: Pursuing PhD (Information Technology), M.E. (Computer Engineering)

Experience: 11+ years

Area of specialization: Cloud Computing, Network Programming, Cryptography & System security

Email: sonali.jadhav@thadomal.org



Mr. Khalid Ansari

Designation: Assistant Professor

Qualification: M.E (Computer Engineering)

Experience: 3+ years

Area of specialization: C Programming, Python Programming, Data Structure, Analysis of Algorithm, Cryptography and System Security, Software Engineering

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Ms. Kiran Israni

Designation: Assistant Professor

Qualification: M.E (Information Technology) Ph.d Pursuing (Computer Engineering)

Experience: 6 Years

Area of specialization: Data Mining, Machine Learning, Artificial Intelligence, Cryptography, Digital Logic, Data Structure, Discrete structure and Graph theory

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Ms. Hema Shukla

Designation: Assistant Professor

Qualification: M.E (Computer Engineering) Ph.d Pursuing, BE

Experience: 13 years

Area of specialization: Image Processing, Programming(C and Java), Operating System, Database

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05 NON TEACHING STAFF

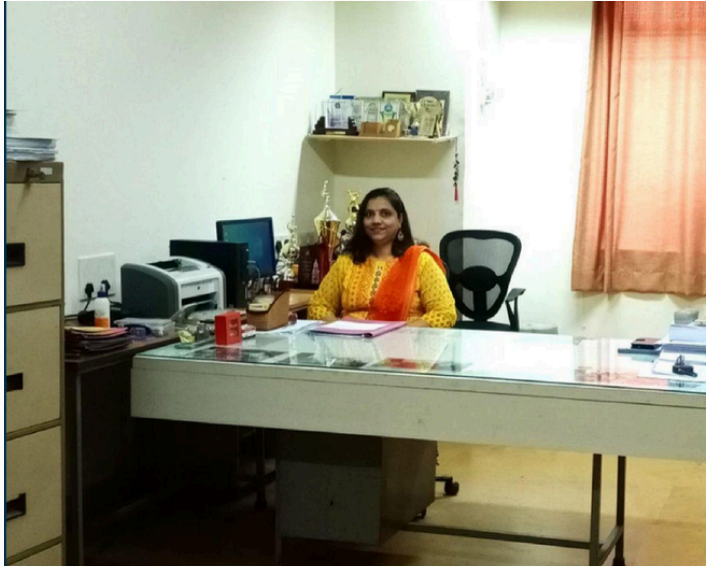
TECHNICAL AND LABORATORY ASSISTANT



LABORATORY ATTENDANTS AND PEONS



06 INFRASTRUCTURE

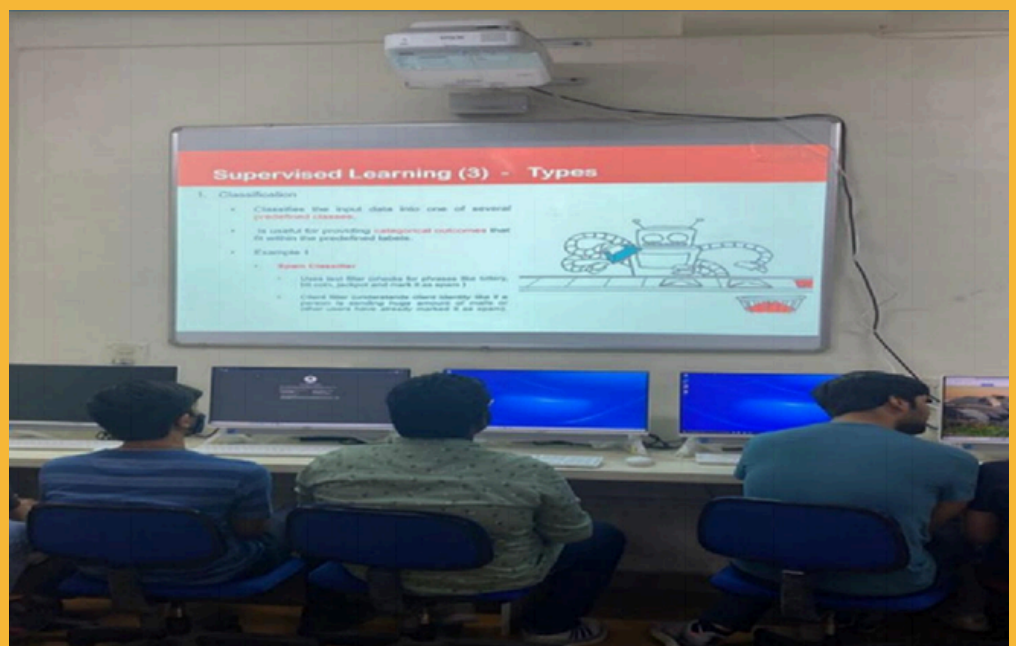


HOD'S OFFICE

The head of the department's office at TSEC serves as the command center for all academic and research activities within the computer Department. Equipped with modern communication tools and a comprehensive digital repository, the office facilitates efficient management and coordination. It is also a hub for faculty and student consultations, ensuring the seamless integration of the department's vision and mission into everyday operations.

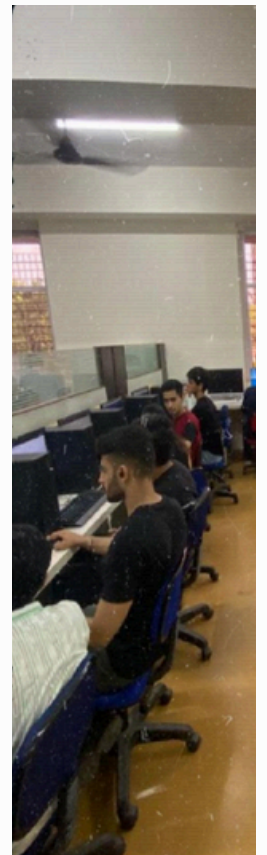
MACHINE LEARNING LABORATORY

The machine learning laboratory is a beacon of innovation, equipped with high performance computing systems and the latest software tools. This lab provides an ideal environment for students and researchers to develop and test machine learning models. It supports a wide range of projects, from image recognition and natural language processing to predictive analytics, fostering hands on learning that bridges theory and practice.



DATA STRUCTURES AND ALGORITHM LABORATORY

Dedicated to the foundational aspects of computer science, the Data structures and Algorithms Laboratory offers student practical experience in designing, implementing, and optimizing algorithms. With advanced computational resources and interactive learning modules, this lab enables students to tackle complex computational challenges, and gain a deep understanding of core principles.



INFRASTRUCTURE

ADVANCED DATABASE LABORATORY



The Advanced Database Laboratory immerses students in the intricacies of data management and database systems. Equipped with cutting-edge database management software and tools for big data analytics, this facility provides a robust environment for studying database design, querying and optimization, as well as exploring emerging trends such as NoSQL databases and cloud-based data solutions.

SOFTWARE ENGINEERING LABORATORY

Supporting the full software development lifecycle, the software engineering laboratory is equipped with the latest integrated development environments (IDEs), version control systems, and software testing tools. This lab enables students to work on real world projects, fostering collaborative skills and practical expertise in software engineering methodologies and best practices.



INFRASTRUCTURE

AI & SOFT COMPUTING LABORATORY

The AI and Soft Computing Laboratory is a dynamic space dedicated to the study and application of artificial intelligence and soft computing techniques. With advanced computing facilities and specialized software for neural networks, fuzzy logic, and genetic algorithms, this lab support cutting-edge research and development in intelligent

systems providing students with the tools to create innovative solutions to complex problems.



SOFTWARE ENGINEERING LABORATORY



Focused on the critical aspects of computer security and network infrastructure, the computing and security laboratory is equipped with state-of-the-art security software and hardware. This lab offers a comprehensive environment for studying cybersecurity threats, cryptographic techniques, and secure coding practices, preparing students to address the challenges of safeguarding information in an increasingly connected world.

INFRASTRUCTURE

A large, multi-story building with a grid of windows, illuminated at night. The building has a classical architectural style with arched windows on the top floor. A sign above the entrance reads "Thadomal Shahani Engineering College".

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The pursuit of knowledge is a continuous loop, refining code with every new insight.

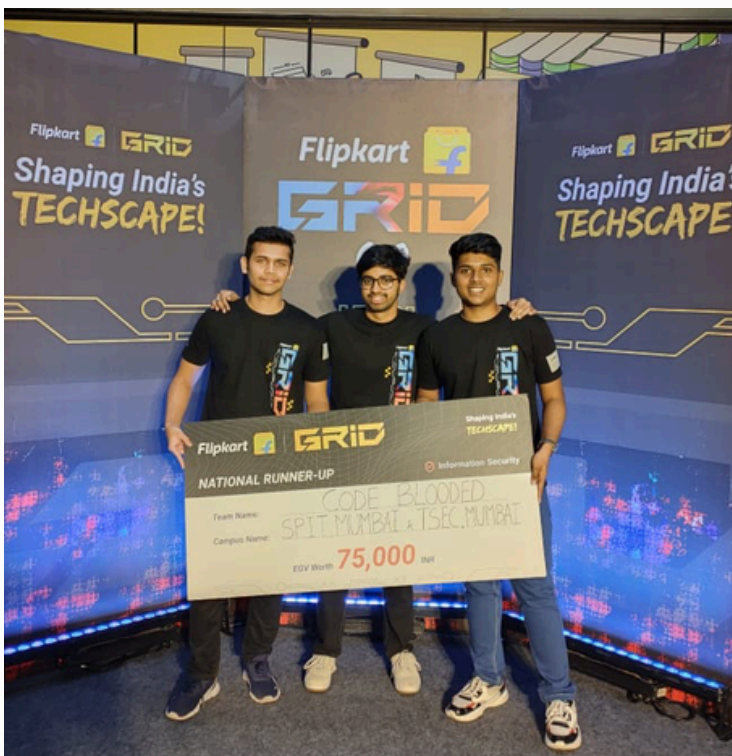
Thadomal Shahani Engineering College

07 STUDENT ACHIEVEMENTS

TECHNICAL ACHIEVEMENTS

FLIPKART GRID 6.0

Om Ahvad from Computer department has secured second place in Flipkart GRiD 6.0, a National level hackathon held at Bangalore



SMART INDIA HACKATHON 2024



Team: Access Denied

Shreyans Jain (BE Comps)
Varun Jajoo (BE Comps)
Ritojnan Mukherjee (TE Comps)
Siddhima De (TE Comps)
Anish Awasthi (TE Comps)
Mayuresh Chavan (TE Comps)

At Nodal centre Ludhiana

Team:

Pooja Gawade - BE Comps
Jitesh Gogia - BE Comps
Shruti Ghagare - BE Comps
Dhruvil Tandel - BE Comps
Mamta Gupta - BE IT
Pranav Patil - TE Comps

**At Nodal Centre
Komarapalayam, Tamil
Nadu**



STUDENT ACHIEVEMENTS

CODEUTSAVA 8.0 NIT RAIPUR



Team: MINGWX

Jash Rashne SE Comps

Juhi Deore SE Comps

Zeeshan Hyder TE Comps

Atharva Khewle TE AIDS

QUASAR 3.0 - NATIONAL LEVEL HACKATHON

Team:

Kavya Chetwani (COMPS)

Karan Choudhary (COMPS)

Jivansh Chawla (COMPS)

Sae Nalawade (IT)



STUDENT ACHIEVEMENTS

CODESSIANCE WINNERS

Team: MINGWX

Jash Rashne SE Comps
Juhi Deore SE Comps
Zeeshan Hyder TE Comps
Atharva Khewle TE AIDS



CODESSIANCE ONLINE WINNERS

Team: Griffin

Zoya Hassan (TE COMPS)
Siddhi Mehta (TE COMPS)
Sagar Manchakatla (TE COMPS)
Pooja Makhijani (TE COMPS)



STUDENT ACHIEVEMENTS

CODESSANCE RUNNER UP'S



Team: Trespassers

Yash Shelar SE COMPS

Akshay Kadam SE COMPS

Pranav Mahamunkar SE
COMPS

Ayudh Kamath SE COMPS

STUDENT ACHIEVEMENTS

TSEC HACKS 2025



Team Name: Hypertext

Assasins:

Fahed Khan - TSEC TE COMPS

Sushmit Sanyal - TSEC TE
COMPS

Chinmay Tullu - TSEC TE COMPS

Tanmay Sarode - TSEC TE
COMPS

CSI RUBIX'25



Team Name: Hacktivist

College Name: TSEC

Team Members:

Fahed Khan - COMPS

Kavya Chetwani - COMPS

Aryan Pathak - IT

Sakshi Vaidya - IT

STUDENT ACHIEVEMENTS

CSI MINITHON 2.0 WINNERS

Team: NPM RUN DEVA

1. Aryan Maurya (Leader)
2. Yuvraj Upadhyay
3. Devanshu Kadam
4. Darshan Soni



Team: BINARY FETCH

1. Raj Singh (Leader)
2. Dhruv Agrahari
3. Sohail Ali Khwazada
4. Taha Alotwala



Team: Console.Code

1. Salif Shaikh (Leader)
2. Mohammad Subhan
3. Ashmit Shelke
4. Sohail Shaikh



HACKSYNC 2025

Team: Ngenx (TSEC)

Team Members:

Sahil Gehani (TE Comps)
Sahil Gurnani (TE Comps)
Rohan Advani (TE Comps)
Eshaan Vaswani (TE Comps)



Team: Hackie Packie

Team Members:

Jash Doshi (BE Comps, TSEC)
Atharv Salian (DJSCE)
Maithili Shinde (BE Comps, TSEC)
Suhani Poptani (SE IT, TSEC)



STUDENT ACHIEVEMENTS

CODEBYTE 1.0 AT LOKMANYA TILAK COLLEGE OF ENGINEERING

Team:

Kavya Chetwani,
Karan Choudhary, and
Arnav Das

HACKANOVA 4.0 WINNERS BY THAKUR COLLEGE

Team: The gitFather

Anish Awasthi TE Comps
Mayuresh Chavan TE Comps
Soham Aversekar TE Comps
Ajinkya Chitre TE Comps



COEP INSPIRON 4.0 BY COLLEGE OF ENGINEERING, PUNE

Team: Chaos Coders

Isha Madlani- SE COMPS

Dev Maheshwari- SE COMPS

Shloka Shinde-COEP student

U' LECTRO 2025 BY IETE-SF MPSTME NMIMS

Team: The Backpropagators

Abhinav Gajria

Chaitanya Kakade

Nikshita Karkera

Rishab Mandal

STUDENT ACHIEVEMENTS

GHR 1.0 NATIONAL HACKATHON BY GHRAISONI, JALGAON



Team: The gitFather

Anish Awasthi (TE Comps)
Mayuresh Chavan (TE Comps)
Soham Aversekar (TE Comps)
Ajinkya Chitre (TE Comps)

ACE 1.0 HACKATHON AT NMIMS MPSTME

Team:

Kavya Chetwani SE Comps
Karan Choudhary SE Comps
Jivansh Chawla SE Comps
Arnav Das SE Comps



STUDENT ACHIEVEMENTS



WINNERS OF SHARK TANK BY RCTSEC

Team ResQ – Final Valuation: ₹30 Cr

Team Members:

Eva Lalwani (SE Comp)

Ritwik Sali (TE EXTC)

33 Food Reservoir – Final Valuation: ₹30 Cr

Team Members:

Vivaan Mansukhani (BE Comp)

Varun Jajoo (BE Comp)

Jay Lulia (BE Comp)

RCMP GENZ X RC RUIA DIGITAL MARKETING HACKATHON

Team:

Yash Mali Se comps
Malhaar Mirchandani Se comps
Naman Narang Se comps
Tarun Chettiar Se comps



NOVEL DEBUT

Yash Siddhpura

Get ready to embark on a journey of stars and destiny! ✨

"Stellar's Fate: Part 1 The Genesis" has launched .

Genre: Fantastic combination of "Science fiction & Mythology"



STUDENT ACHIEVEMENTS

SPORTS ACHIEVEMENTS

SHAZAM 2024



Chutki spinners team - Crickout Runner up

Pranav Patil (TE Comps)
Abid Ghole (BE Comps)
Ayush Bhanushali (BE Comps)
Pranay Khot (TE Comps)
Ashutosh Shrivastava (BE Aids)
Siddhesh Bandagonda (BE Aids)
Vanshika Kaurani (TE Comps)

Crickout - Player of the Tournament

Pranav Patil (TE Comps)

Smash mixed doubles - Runner up

Harsh Mishra (TE IT)
Sakshi Vaidya (TE IT)

Checkmate -Third Place

Swaraj Pai (BE CHEM)

Smash Fest - Runner up (Men's Singles)

Vansh Ahuja (BE Comps)

Goti Kings - Strike Third Place

Hrishikesh Garale (TE CHEM)
Ayushman Singh (TE CHEM)

TheLast Piece - Strike Runner up

Mubasshir Khan (TE COMPS)
Satyam Bindhani (TE COMPS)

SPORTS ACHIEVEMENTS

BATTLE OF BRANCHES BY RCTSEC



Football winners

Abid Ghole (captain) (BE COMPS)
Kunal Mahimkar (TE COMPS)
Gaurav dhirwani (TE COMPS)
Vishal mansharamani (TE COMPS)
Pratish makhija (BE COMPS)
Hritik sehejwani (BE COMPS)

Cricket winners

Abid Ghole (captain) (BE COMPS)
Pranav patil (TE COMPS)
Pranay khot (TE COMPS)
Purvash mavle (TE COMPS)
Kunal mahimkar (TE COMPS)
Aaryan Raaje (SE COMPS)
Ayush Bhanushali (BE COMPS)

STUDENT ACHIEVEMENTS

PRINCIPAL'S EXCELLENCE AWARD



CHAITANYA KAKDE



JASH DOSHI



POOJA GAWDE



SARAH PENDHARI



SHREYANS JAIN



NIYATI SAVANT

HALL OF FAME



ENVOYS, COMPUTER DEPARTMENT



AMBASSADORS, COMPUTER DEPARTMENT



TSEC HACK'S 25



TSEC Hacks stands as the Flagship event by TSEC CodeCell at Thadomal Shahani Engineering College, Bandra. This annual hackathon is a 24-hour, in-person extravaganza crafted to cultivate inventive problem-solving skills in a real-world context. It serves as a dynamic platform, attracting participants from diverse backgrounds to collaboratively explore and innovate. Rooted in the ethos of TSEC, the event is more than just a hackathon—it's an immersive experience designed to inspire, empower, and propel technological innovators.

**1700+ REGISTRATIONS
FROM 5 CITIES !
PRIZE POOL OF 60000!**



BARRISTER H.G ADVANI GOLD MEDALIST



Om Khandu Awhad

Firstly, I would like to thank our Principal, Dr. G. T. Thampi Sir, Dean of Student Affairs **Dr. Himani Deshpande Ma'am**, Head of the Computer Department **Dr. Tanuja Sarode Ma'am**, and all the **esteemed professors of the Computer Engineering Department** for nominating me for this gold medal. It is because of your support and belief in me that I have received this medal today.

I would like to start from the beginning. In 2004, I was born in a small village in Nashik. Just after I was born, I was diagnosed with pneumonia and was in the ICU for 9 days. My mother didn't even know whether I was alive. After we came back to Mumbai, within a few months, my mother was diagnosed with a severe illness. Again, I was away from her. Through it all, my father was our pillar of strength who stood by us every step of the way. Thank you, Baba, for always supporting us. And thank you, Aai – you are here today, strong and healthy, to witness this beautiful day. I got admission into an English-medium school in Goregaon. Back then, I was far away from studies and academics. I was in my own world of theatre, plays, and dramas. I never had the slightest thought of engineering or computers.

In 2019, I passed my 10th standard and noticed that everything was going digital. So, I decided to enter the world of software. I got admission into one of the diploma colleges in Maharashtra – Government Polytechnic Mumbai. This place completely changed my life. I made some of my best friends there. When I was in the first year, I wondered – who would hire me? I had no computer background and zero programming knowledge. But from the first year itself, I started working on the required technologies. Finally, the time came to apply for internships. I applied to a startup in Mumbai named Circle, where I fortunately got hired as a Junior Python Developer Intern. I want to thank Mr. Deepak Dhingra for trusting a 17-year-old kid and giving me a work opportunity. Since then, my journey of internships never stopped.

After passing my diploma, it was time to apply for a Bachelor's in Engineering. I created a list of top colleges and finally got admission into the **Computer Engineering Department of TSEC** – the dream was now reality. When I joined, I was very excited about technical communities and then I got to know about one of the best committees in our college – **CodeCell**. I remember being nervous during the self-interview. Fortunately, I got into CodeCell as a Senior Committee Member. I want to thank **Professor Tasneem Mirza** and all my seniors who believed in me and accepted me. Thank you, Ma'am, for trusting me, giving me responsibilities, and acknowledging my contributions.

As I was a Direct Second Year student, I didn't get much time to make friends, but because of CodeCell, I met Abhishek Upadhyay, Jagjeet Sappal, Anas Khan, Parth Pauranik, Mohit Sayyed, Hamza Sayyed, and all my fellow committee members – the best technical people in our college. Thank you, guys.

One of our ex-CodeCell members and my senior, Sachin Jangid, invited me to join his hackathon team, which was already recognized for multiple wins. I was lucky to get into a team not just of friends, but the most talented technical people – Sachin Jangid, Omkar, Suraj Sawan, Jash Doshi, Abhigyan Bafna, and all the team members of MingW. Thank you, guys.

The second year ended, and third year began – internship season. Companies started approaching campus. Two companies – Fischer Jordan and Deutsche Bank – had almost back-to-back processes. I never imagined I would be selected at an MNC like Deutsche Bank, but by God's grace, I got selected in both.

I did my winter internship at Fischer, a remote US-based startup, and my summer internship at Deutsche Bank. Fortunately, I received a Pre-Placement Offer from Deutsche Bank. For that, I want to thank the entire placement cell of TSEC and **Professor Monika Tolani Ma'am** for bringing such great opportunities and proving that TSEC has one of the best placements! Thank you!

I also want to thank **Professor Sakshi Surve Ma'am** for always motivating me during challenging times. Though she isn't here today – thank you, Ma'am. I want to thank my parents for supporting me. Your hard work and sacrifices have helped me study in a good college, wear good clothes, and fulfill all my needs. Thank you. Thank you. Thank you, Baba. Lastly, I want to thank God for blessing me with such wonderful people in my life, because of whom I have reached here. Thank you, God.

I would like to share some profound Marathi words that beautifully express the meaning of good values, wisdom, and virtue:

”सुसंगती सदा घडो सुजन वाक्य कानी पडो, कलंक मतीचा झडो विषय सर्वथा नावडो”

Translation: May I always be in good company, may the words of the virtuous reach my ears, May the stains on my mind be cleansed, and may I stay away from all bad influences.

A large, multi-story building with a classical architectural style, featuring arched windows and a prominent entrance archway. The building is illuminated at night, with warm lights glowing from the windows. A sign above the entrance reads "Thadomal Shahani Engineering College".

“

Education is not a download; it is a
compilation of data into a
functional program for the future.

Thadomal Shahani Engineering College

08 SEM TOPPERS

SEMESTER 8 B.E

FIRST PLACE 10 SGPI



SHETTY SHIRISH SHASHIKANTHA



PENDHARI SARAH AMJAD

SECOND PLACE 9.86 SGPI



BHATIA HARSHITA RAMESH

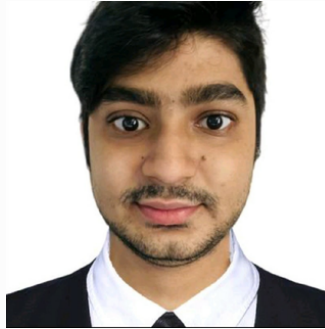
SEM TOPPERS

SEMESTER 8 B.E

THIRD PLACE 9.71 SGPI



RENEE DAVID BEULA



GAWLI PRATHAM MANGESH



SHETE OM ANIRUDHA



KINGRANI KAPIL SURESHLAL



PUNJABI SHRUTI DEEPAK



TIWARI VIVEK ANAND



TOTLANI SIMRAN MANOJ



**UPADHYAY ABHISHEK
MAHINDRA**



MANDAL RISHAB RAJESH

SEMESTER 7 B.E

FIRST PLACE 9.86SGPI



OM AVHAD

SECOND PLACE 9.73 SGPI



SARAH PENDHARI



OM SHETE



TIWARI VIVEK



TOTLANI SIMRAN

SEM TOPPERS

SEMESTER 7 B.E

THIRD PLACE 9.59 SGPI



DISHA BAJAJ



POOJA GAWADE



DHRUVI PATEL

SEMESTER 6 T.E.

FIRST PLACE 10 SGPI



RIA AMBADAN



SHREYA BHATIA



ATHARVA RAJPURKAR



TANMAY SARODE



TANISHA SHEWAKRAMANI



ASHMIT SHELKE

SEM TOPPERS

SEMESTER 6 SE

SECOND PLACE 9.87 SGPI



POOJA MAKHIJANI



SIDDHI MEHTA



VEDANT BORKAR



PRITAL CHANDNA



ANVEE SHETYE



JAI RAGHANI



**GAURESH
BAGAYATKAR**



OCEAN CHAUDHARY



SURYANSH SAXENA



SIDDHIMA DE



RIA SHANBHAG

SEM TOPPERS

SEMESTER 6 T.E

THIRD PLACE 9.83 SGPI



VEDANT CHAUDHARI

SEMESTER 5 T.E.

FIRST PLACE 10 SGPI



AMBADAN RIA



BHATIA SHREYA



DE SIDDHIMA



JAMANDAR AFJAN



RAJPURKAR ATHARVA

SEM TOPPERS

SEMESTER 5 TE

SECOND PLACE 9.96 SGPI



PRITAL CHANDNA



TRISHA NADAR

SEMESTER 5 T.E.

THIRD PLACE 9.87 SGPI



ANJALI CHAVAN



SIMAR CHAWLA



VEDANT KITUKALE



RITONJAN MUKHERJEE



SURYANSH SAXENA



VEDANT CHAUDHARI

SEM TOPPERS

SEMESTER 4 SE

FIRST PLACE 10 SGPI



KAVYA CHETWANI



JUHI DEORE



DOMAL NITESH



**AAKANKSHA MADHAV
JOSHI**



RUPANI ESHIKA PRAVEEN

SEMESTER 4 S.E.

SECOND PLACE 9.91 SGPI



PATTHAN KAUSAR NAYAB

SEM TOPPERS

SEMESTER 4 SE

THIRD PLACE 9.88 SGPI



**BHAGAT SUNIL
MAHESH**



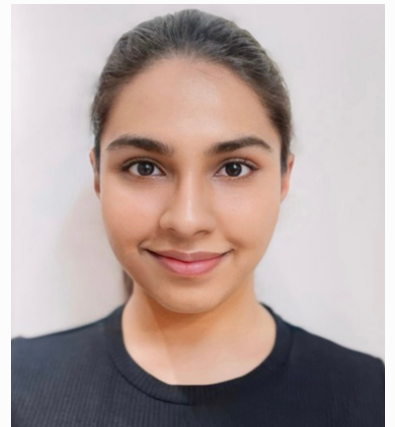
**CHANGLANI ROSHNI
KAMLESH**



KAMRA KRISH ANIL



YADAV RITESH RAJKUMAR



**RITIKA NITIN
MULCHANDANI**

SEM TOPPERS

SEMESTER 3 SE

FIRST PLACE 10 SGPI



KAVYA CHETWANI



ARNAV DAS



JUHI DEORE



TEJASWINI GOWDA



AARJAV JAIN



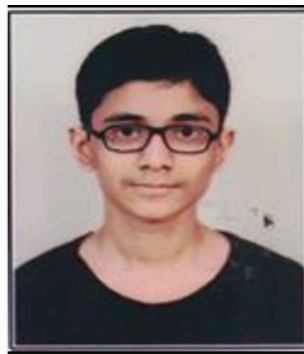
JIYA NARWANI



JATIN NIMJE



KAUSAR PATHAN



SHEKHAR RATHOD



RUSHIKESH SARAP



SAHIL SHIRKE



AMIN SOLKAR



HARSH TALREJA



ANNESHA TECKCHANDANI



MANAS VERMA

SEM TOPPERS

SEMESTER 3 SE

SECOND PLACE 9.96 SGPI



ATHARVA JADHAV



RITIKA MULCHANDANI



FARAAZ SHAIKH



RITESH YADAV

SEMESTER 3 S.E.

THIRD PLACE 9.91 SGPI



GOWDA ADITHYA



AAKANKSHA JOSHI



SIDDHANT PANDEY



PAAKSHI RAMRAKHYANI



AMEY SAWANT



VARUNA TECKCHANDANI



YASHAS VADDI

09 FACULTY ACHIEVEMENTS

DR. ARCHANA PATANKAR



Received award as Best Dean Research in CSI Technext India 2024

FACULTY ACHIEVEMENTS

MRS SAKSHI SURVE



S. M. SURVE AND H. DAND (2024), "ENHANCING TRANSLATION QUALITY OF ENGLISH MEDICAL TEXT REPORTS INTO MARATHI THROUGH INTEGRATION OF GOOGLE AND MICROSOFT BING TRANSLITERATION," OPJU INTERNATIONAL TECHNOLOGY CONFERENCE (OTCON) ON SMART COMPUTING FOR INNOVATION AND ADVANCEMENT IN INDUSTRY 4.0, PP. 1-6, DOI: 10.1109/OTCON60325.2024.10687492.



Best Paper Award – ISAI-2025

This award was presented at the Second International Symposium on Artificial Intelligence (ISAI-2025), a prestigious event organized by: Department of Computer Science and Engineering, National Institute of Technology (NIT) Sikkim, and Computer Society of India, Kolkata Chapter, in collaboration with Springer.

Paper Title:

"Enhanced Financial Statements Classification by Synthetic Data Augmentation Using Generative Adversarial Networks"

Authors:

Sanchita Gangopadhyay and Dr. Ujjwala Bharambe

FACULTY ACHIEVEMENT

4 FACULTIES RECEIVED BEST PAPER AWARD (3RD RANK)



Dr Archana Patankar



Dr Nabanita Mandal



Dr Juhi Janjua



Ms. Darakhshan Khan

10 TOP PLACEMENTS



DEUTSCHE BANK

No. of Students Placed : 13
Package Offered : 20.20 LPA

JPMORGAN CHASE & CO.

No. of Students Placed : 3
Package Offered : 19.75 LPA

ORACLE

No. of Students Placed : 11
Package Offered : 19.18 LPA



No. of Students Placed : 1
Package Offered : 17 LPA

SECLORE

No. of Students Placed : 2
Package Offered : 13 LPA



No. of Students Placed : 6
Package Offered : 8.29 LPA

Deloitte.

USI

No. of Students Placed : 14
Package Offered : 7.6 LPA

India

No. of Students Placed : 22
Package Offered : 7.6 LPA

Around 52 students have received admit from Universities like Southern California, University of Utah, Arizona State University, NYU Tandon School of Engineering, North Carolina State University. Around 6 students have received scholarship from their respective universities which covers some percentage of their tuition fees.



“

Some lessons are best understood
the **night before the exam.**

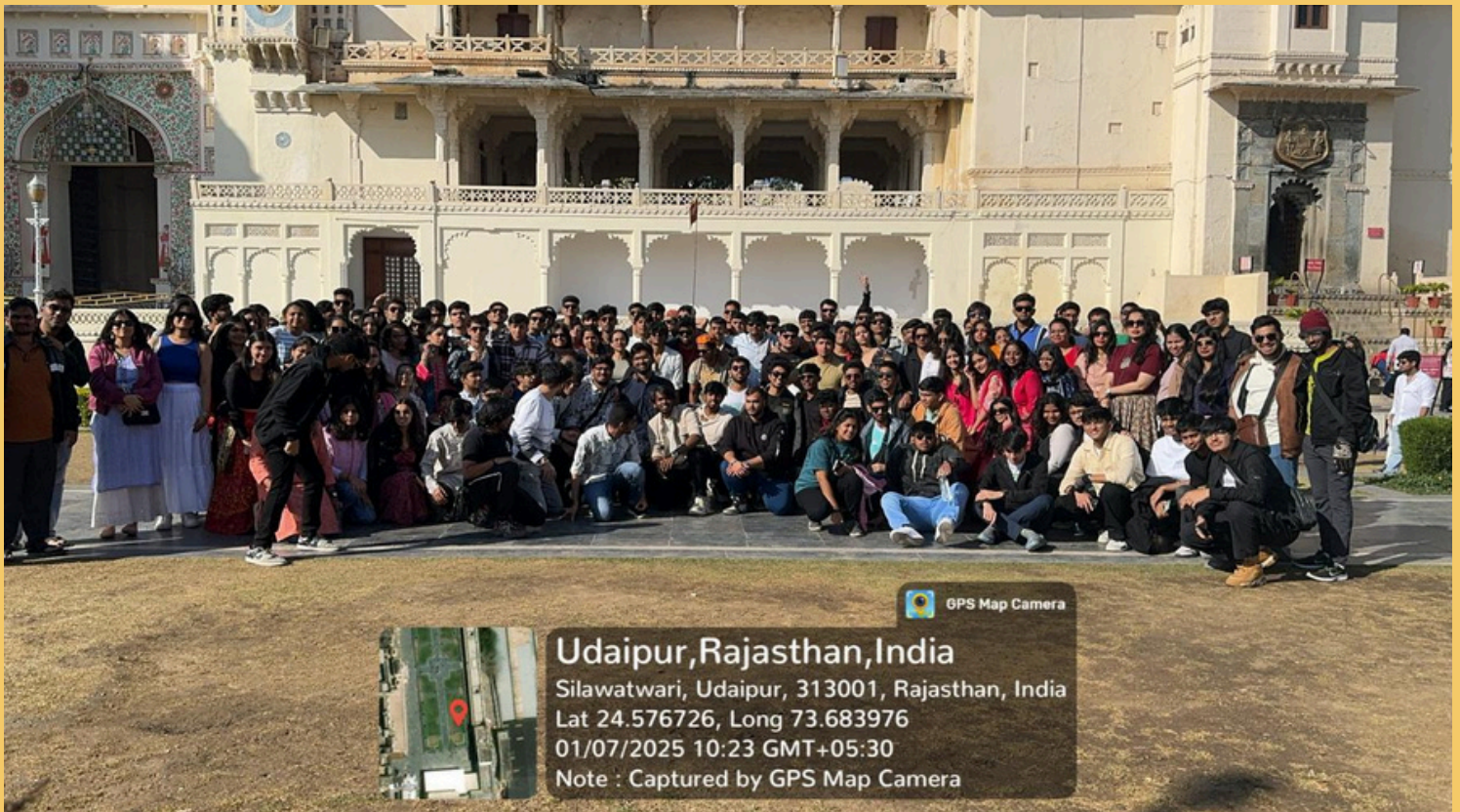
Thadomal Shahani Engineering College

11

INDUSTRIAL VISIT UDAIPUR



The TSEC Industrial Visit 2025 successfully combined educational experiences with cultural exposure. The visits to Dainik Bhaskar and Historic Observatory and Engineering Exploration(Jantar Mantar) provided students with a unique blend of industrial and engineering knowledge, while the cultural activities fostered camaraderie and appreciation for India's heritage. Special thanks to the organizers, coordinators, and participants for making this visit a grand success.





INDUSTRIAL VISIT 2025



Program Co-Ordinator:
Dr. Himani Deshpande

Student Co-Ordinator:
Hriday Jain (General Secretary)

Date:
2nd January 2025 - 8th
January 2025

Location:
Jaipur - Ranthambore
Total number of participants:
148

12 STUDENT PUBLICATIONS

Benchmarking Deep Learning Models for Automated MRI-based Brain Tumor Detection: In-Dept Analysis of VGG16, VGG19, ResNet-50, MobileNet and InceptionV3

Author: Sarah Pendhari, Sonal Shroff

The early and precise diagnosis of brain tumors is paramount in the medical field, significantly impacting treatment efficacy and patient survival rates. Magnetic Resonance Imaging (MRI), a non-intrusive diagnostic tool, is extensively utilized for identifying brain tumors, eliminating the need for invasive biopsies. However, the manual interpretation of MRI scans is a challenging and laborious task due to the voluminous and complex nature of the three-dimensional images it generates. So this study harnesses the power of advanced state-of-the-art deep learning models - Convolutional Neural Network (CNN), VGG16, VGG19, ResNet-50, Mobile Net and InceptionV3 - to automate and enhance the accuracy of brain tumor detection from MRI data. The findings demonstrate a marked improvement in the detection and accuracy of brain tumors, showcasing the potential of deep learning in revolutionizing medical imaging diagnostics with accuracy scores of CNN being 97.55%, VGG16 being 97.96%, VGG19 being 97.55%, ResNet-50 being 90.20%, MobileNetV1 being 96.73% and InceptionV3 being 97.55%. This innovation not only streamlines the diagnostic process but also opens new avenues for early intervention strategies, ultimately contributing to improved patient outcomes in the fight against one of the most daunting health challenges of all time.

International Journal of Computer Applications

Published in IJCA, Vol, 186-No.50, Nov.2024

<https://www.ijcaonline.org/archives/volume186/number50/pendhari-2024-ijca-924233.pdf>

ColorViTAN: A hybridised approach using Vision Transformers and CycleGAN to add color to greyscale images

Author: Sarah Pendhari

In this paper we introduce ColorViTGAN, an approach to image colorization that leverages the power of Vision Transformers (ViT) and the cyclic consistency of CycleGANs. While traditional colorization methods often struggle with semantic understanding and global consistency, our hybrid model addresses these challenges by combining the long-range dependency modelling of ViTs with the image-to-image translation capabilities of CycleGANs. Training our model is done on the diverse Places365 dataset and the CIFAR10 dataset, using the L channel of the Lab* color space as input and generating the corresponding a* and b* channels. The ViT-based generator captures intricate spatial relationships and contextual information, enabling more accurate and semantically consistent colorization. The discriminator, also ViT-based, ensures the generated colors are realistic and coherent. Our results show that ColorViTGAN outperforms state-of-the-art colorization methods in both qualitative human evaluations and quantitative metrics such as PSNR of 22.659, SSIM of 0.928 for Places365. The model shows particular strength in handling complex scenes with multiple objects and varying lighting conditions. Furthermore, the cyclic consistency loss of the CycleGAN component allows our model to learn from unpaired data, significantly expanding the potential training dataset.

Conference/Journal details:

I2024 International Conference on Intelligent Computing and Emerging Communication Technologies (ICEC)

Published in IEEE

<https://ieeexplore.ieee.org/document/10837458>

Attention-Enhanced Prototypical Networks for Few-Shot Microaneurysm Detection in Diabetic Retinopathy Images

Author: Sarah Pendhari, Rishi Kewaliya

Early detection of microaneurysms in diabetic retinopathy (DR) is essential for prohibiting vision loss, yet automated detection remains difficult due to the limited labeled data and the subtle nature of these lesions. This paper presents a few-shot learning approach that synergistically combines dual attention mechanisms with prototypical networks for microaneurysm detection in fundus images. Our architecture implements a modified ResNet-50 backbone enhanced with spatial and channel attention modules, optimized specifically for small lesion detection. The spatial attention module generates precise localization maps, while the channel attention mechanism adaptively weights feature importance. This is integrated with a prototypical network framework that enables efficient learning from limited labeled examples through metric-based classification. Evaluated on the IDRiD dataset, our method achieves state-of-the-art performance with an AUC-ROC of 0.947, sensitivity of 0.892, and specificity of 0.941, significantly outperforming traditional deep learning approaches. The model demonstrates robust performance with as few as 5 shots per class, while maintaining high detection accuracy (0.915 F1-score) using only 5% of the training data needed by conventional methods. Ablation studies demonstrate the effectiveness of our dual attention mechanism, with the full model showing a 2.4% improvement in AUC-ROC over the baseline prototypical network.

Conference/Journal details:

3rd IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2025)

Published in IEEE

<https://ieeexplore.ieee.org/abstract/document/10985676>

Comparative Analysis of Data Augmentation Techniques in CNN-Based Classification of Atelectasis

Author: Nidhi Kadam, Faculty: Tanuja Sarode, Vaishali Suryawanshi

This research delves into the critical issue of atelectasis, its causes, and potential complications if left untreated. Leveraging deep learning algorithms, particularly convolutional neural networks (CNN), the paper explores their application in medical image analysis, focusing on the detection of atelectasis using the "chestX-ray8" database. The study compares various data augmentation techniques for improved accuracy, showcasing the importance of augmentation in enhancing model generalization. Through meticulous experimentation and evaluation, the research underscores the significance of balanced augmentation strategies in refining CNN performance for medical image analysis, offering valuable insights for future research and practice in radiology applications. The several data augmentation methods used in CNN-based Atelectasis classification are compared in this review study. Geometric modifications, intensity-based augmentations, and sophisticated techniques like generative adversarial networks (GANs) are all covered in this paper. We examine each technique's advantages and disadvantages, how they affect model performance, and whether or not they can be used in clinical situations through a methodical examination. The purpose of this article is to help practitioners and researchers choose the best augmentation techniques to increase the accuracy and robustness of CNN models for the categorization of atelectasis.

Conference/Journal details:

Journal of Microwave Engineering and Technologies., Vol. 2024; 11(03)

<https://journals.stmjournals.com/jomet/article=2024/view=177481/>

Enhancing Sign Language Interpretation with Multiheaded CNN, Hand Landmarks and Large Language Model(LLM)

Author: Chaitanya Kakade, Nidhi Kadam, Vishal Kaira, Rishi Kewalya

Sign language is an important mode of communication for the deaf and mute community. Despite its importance, there is still a large communication gap between deaf community and the hearing world. We introduce a new system that converts sign language into text, using a novel multiheaded Convolutional Neural Network (CNN) that is trained on three different sets of images—raw images, uniquely segmented images, and hand landmarks information simultaneously to recognize sign language gestures accurately for different hand textures under disparate background conditions. Additionally, a Large Language Model (LLM) is incorporated to transform these recognized signs into concise and meaningful sentences. This combination ensures the text is both understandable and grammatically correct, thereby reducing the communication delay that exists in multiple Sign Language Recognition (SLR) systems. The model excels in capturing nuanced features and variations in sign gestures. Tests show that our novel approach is highly effective in real-time recognition, demonstrating its potential to improve communication for the Deaf community greatly.

Conference/Journal details:

2024 IEEE International Conference on Future Machine Learning and Data Science (FMLDS)

Published in IEEE

<https://ieeexplore.ieee.org/document/10874050>

Investigating the Efficacy of Gradient Boosting for Skin Type Classification

Author: Pooja Gawde

In today's world, maintaining a healthy skin has become a priority for many individuals. Glowing and clear skin is considered to be a reflection of a healthy person. People explore and try a wide range of skin products to achieve clear, smooth, better-looking skin but often end up choosing the wrong ones due to lack of knowledge about their own skin. We'll explore the intriguing realm of skin type classification using different machine learning algorithms in this paper. Our approach uses advanced techniques like random forest, support vector machine, ensemble methods like stacking, bagging, and boosting to classify skin types as dry, normal, and oily through image analysis. Our research aims at examining the performance of various algorithms on our personalized dataset which contains a variety of data images divided into dry, normal, and oily. After performance evaluation, gradient boosting surpasses all other algorithms by achieving maximum accuracy and precision, highlighting its importance in cosmetic and dermatology industry.

Conference/Journal details:

ICT Systems and Sustainability. ICT4SD 2024

Published in Lecture Notes in Networks and Systems, vol 1163. Springer

https://link.springer.com/chapter/10.1007/978-981-97-8537-7_36

Optimal Detection of Diabetic Retinopathy Severity Levels Using Attention-Based CNN and Vision Transformers (ViT)

Author: Chaitanya Kakade

Diagnosing diabetic retinopathy (DR) from colour fundus images is challenging as it requires skilled clinicians to recognize and interpret multiple small features and utilize a complex grading system, making the process both difficult and time-consuming. Prior detection of this condition is important to prevent any further complications such as partial or complete blindness. This study presents an approach for detecting the severity levels of diabetic retinopathy using a combination of Attention-Based Convolutional Neural Networks (CNN) and Vision Transformers (ViT). The method addresses the need for accurate classification of retinal images across multiple severity levels of diabetic retinopathy. We made use of a unique combination of attention mechanisms in CNN and transformers, thereby enhancing the model's ability to focus on critical regions within the retinal images. Experimental results show improvements in classification accuracy of around 95%, sensitivity, specificity, and other key performance metrics, making it a potentially better solution for automated diabetic retinopathy detection.

Conference/Journal details:

2024 International Conference on Modeling, Simulation & Intelligent Computing (MoSiCom)

Published in IEEE

<https://ieeexplore.ieee.org/document/10881457>

Predictive Analytics for Enhancing Crop Yield using General Adversarial Networks and Its Challenges

Author: Chaitanya Kakade Faculty: Ujwala Bharambe

In the contemporary landscape of agriculture, predictive analytics has emerged as a pivotal tool for enhancing crop yields. The integration of Generative Adversarial Networks (GANs) into this domain presents a novel approach that promises to significantly improve predictive accuracy. This research delves into the application of GANs for crop yield prediction, highlighting both the potential benefits and inherent challenges. Advanced machine learning approaches provide powerful crop production forecasting solutions, making predictive analytics an increasingly significant tool for enhancing agricultural output. GANs are a unique approach in this subject that generates synthetic data while modelling intricate interactions within agricultural information. This research looks into the use of GANs for crop yield prediction, specifically its capacity to mimic diverse environmental and soil conditions for better yield optimisation. It also highlights major problems in the use of GANs, such as data quality, model stability, and the intrinsic complexity of agricultural systems. The study's goal is to provide a balanced picture of GANs' potential and restrictions in predictive agriculture, so helping to build more efficient and sustainable farming practices.

Conference/Journal details:

IEEE India Geoscience and Remote Sensing Symposium

(InGARSS 2024)

<https://ieeexplore.ieee.org/document/10984042>

Carbon Emission Estimation in Sahydri (Western Ghats) Resulting from Burning Grassland Biomass

Author: Chaitanya Kakade Faculty: Ujwala Bharambe

Biomass burning contributes to large quantities of gaseous pollutants and aerosol particles in the atmosphere, having a significant impact on air quality, human health, and climate. This study examines the complex topic of estimating carbon emissions from grassland biomass burning in the Sahyadri region (Western Ghats). We calculate total burnt area over the period of ~5 months (from January to May 2022) using normalized burned index and innovative methods of subsequent subtraction technique. The burnt area is used to calculate the total carbon dioxide emitted because of burning using IPCC emission factors. Our conservative and liberal estimates indicate 9.9 and 25.83 million tons of carbon dioxide emissions by biomass burning.

Conference/Journal details:

IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium

Published in IEEE

<https://ieeexplore.ieee.org/document/10641120>

TANUJA SARODE, VAISHALI SURYAWANSHI "HADAMARD WALSH SPACE-BASED HYBRID TECHNIQUE FOR IMAGE DATA AUGMENTATION", IJAI, FEBRUARY 2025.

DR. TANUJA K .SARODE, "ANALYZING THE IMPACT OF FEATURE SELECTION ON CROP YIELD PREDICTION," JOURNAL OF COMPUTER AND COMMUNICATIONS, INTERNATIONAL, 2024.

DR. TANUJA K .SARODE, NABANITA MANDAL "MACHINE LEARNING BASED PREDICTION OF WIND SPEED FOR RATNAGIRI REGION, INDIA," AI FOR CLIMATE CHANGE AND ENVIRONMENTAL SUSTAINABILITY, INTERNATIONAL, 2024.

DR. TANUJA K .SARODE, "HYBRIDISED PRE-TRAINED DEEP NETWORK WITH ASPEN-LUPUS BIDIRECTIONAL LONG SHORT-TERM MEMORY CLASSIFIER FOR IMAGE-BASED EVENT CLASSIFICATION," INTERNATIONAL JOURNAL OF ELECTRICAL & COMPUTER ENGINEERING, INTERNATIONAL CONFERENCE ON MACHINE LEARNING AND DATA ENGINEERING, INTERNATIONAL, 2024.

DR. TANUJA K .SARODE, VAISHALI SURYAWANSHI "PLANT DISEASE DETECTION LEVERAGING LATENT SPACE BASED MIXING METHODS FOR IMAGE DATA AUGMENTATION," CARJ, INTERNATIONAL, 2024.

DR. TANUJA K .SARODE, VAISHALI SURYAWANSHI "COMPARATIVE ANALYSIS OF DATA AUGMENTATION TECHNIQUES IN CNN-BASED CLASSIFICATION OF ATELECTASIS," JOURNAL OF MICROWAVE ENGINEERING AND TECHNOLOGIES, INTERNATIONAL, 2024.

DARAKHSHAN KHAN, DR. ARCHANA B. PATANKAR "AN EXPERIMENTAL COMPARISON OF CLASSIC STATISTICAL TECHNIQUES ON UNIVARIATE TIME SERIES FORECASTING," PROEDIA COMPUTER SCIENCE, INTERNATIONAL CONFERENCE ON MACHINE LEARNING AND DATA ENGINEERING, INTERNATIONAL, 2024.

DR. ARCHANA B PATANKAR, "SELF-GT-BILSTM: MODIFIED SELF-CONFIGURABLE ADAPTIVE GOAL TARGET OPTIMIZED DEEP LEARNING MODEL FOR INTRUSION DETECTION," IEEE CONFERENCE, 4TH INTERNATIONAL CONFERENCE ON SOFT COMPUTING FOR SECURITY APPLICATIONS ICSCSA-2024, INTERNATIONAL, 2024.

DR. ARCHANA B PATANKAR, "SELF-CONFIGURING INTRUSION DETECTION USING ADAPTIVE GOAL TARGET OPTIMIZATION BASED DEEP BI-LSTM IN BLOCKCHAIN NETWORKING SYSTEMS," INTELLIGENT DECISION TECHNOLOGIES, PAPER ACCEPTED.

JANJUA, JUHI & PATANKAR, ARCHANA. (2024). EXPLORING THE IMPACT OF DENOISING AUTOENCODER ARCHITECTURES ON IMAGE RETRIEVAL. PROEDIA COMPUTER SCIENCE. 235. 2557-2566. 10.1016/J.PROCS.2024.04.241.

JAYANT GADGE, "THE EVOLVING LANDSCAPE OF CONVERSATIONAL AI IN DIGITAL COMMERCE: INSIGHTS INTO APPLICATIONS AND USER INTERACTION," ICTCS 2024 - JAIPUR, INDIA, INTERNATIONAL, PAPER ACCEPTED.

FACULTY PUBLICATIONS

DR. SEEMA KOLKUR, SHASHWAT SATAO, PRITHVI ROHIRA, ISHAN SAKSENA, DARSH SHAH, "COMPARATIVE ANALYSIS OF GANS AND CNN FOR IMAGE COLORIZATION", INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS IJCRT NOV 24

DR. SEEMA KOLKUR, PREM ACHARYA, REBANTA DADHICH, PRAJWAL DHULE AND AAYUSH DODIA, "DEEP LEARNING BASED IMAGE TAMPERING DETECTION" HINWEIS INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ENGINEERING AND TECHNOLOGY (RTET) DECEMBER 28-29, 2024

DR. SEEMA KOLKUR, YASHAS VADDI, NIMISH TILWANI, MADHAVA VED, "LEVERAGING HAND GESTURE RECOGNITION AND LLM FOR DEVELOPING A NON-CONTACT, REAL-TIME VIRTUAL, IMMERSIVE TEACHING AID" JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH JETIR DEC 24

DR. SEEMA KOLKUR, VAISHALI MALKAR, "PROFILING OF LEARNERS AND INSTRUCTORS FOR DEVELOPING AN INTELLIGENT LEARNING ENVIRONMENT" 2ND DMIHER INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN HEALTHCARE, EDUCATION AND INDUSTRY (IDICAIEI) IEEE NOV 24

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Sr.No.	Name of Faculty	Number of Publications
1	Dr. Tanuja SarodeS	6
2	Dr. Archana Patankar	3
3	Mr. Jayant Gadge	1
4	Ms. Seema Kolkur	1
5	Ms. Sakshi Surve	4
6	Ms. Ujwala Bharambe	4
7	Ms. Vaishali Suryawanshi	3
8	Ms. Manisha Dumbre	1
9	Ms. Rupali Sarode	2
10	Ms. Vijaya Padmadas	1
11	Ms. Arti Deshpande	5
12	Ms. Nabanita Mandal	1
13	Ms. Darakhshan Khan	1
14	Ms. Juhi Janjua	1
15	Ms. Shilpa Ingoley	3

14 FACULTY DEVELOPMENT PROGRAM

GEOSPATIAL COMPUTING AND APPLICATIONS



1. Building state of art laboratories with the help of internal accruals / government funding / industry funding
2. Collaborative research initiative with premier research organizations in the country
3. Subjecting and initiating learners to entrepreneurship training program and nascent technologies which shall be beyond curriculum
4. Developing instructional content leveraging new findings of cognitive load theories and visual learning
5. Initiating public private partnership to setup startup ventures to help learners evolve as entrepreneurs in ICT
6. Extensively promote participation in application building competition getting organized externally and internally to enable learner to apply theoretical understanding in real time functional area

Department Mission

Course Objectives

- Learn geospatial data acquisition through Remote Sensing, LiDAR, and GPS for real-time decision-making.
- Master data processing techniques using raster, vector, and LiDAR formats for GIS applications.
- Apply Geospatial intelligence including Machine Learning and Deep Learning, to enhance geospatial analytics and predictive modeling.
- Address security and privacy challenges in geospatial computing while exploring NLP and emerging technologies



Certificate

- Participation E-certificate will be issued by TSEC after completion of the required criteria.
- Participant with valid ISTE membership will get an E-certificate from ISTE.

Resource Persons

1. Dr. G.T Thampi
Principal, Thadomal Shahani Engineering College
2. Dr. Surya Durbha
Professor, IIT Bombay
3. Prof. C S Kulkarni
Associate Professor, Thadomal Shahani Engineering College
4. Dr. Shailesh Deshpande
Senior Scientist, Tata Consultancy Services
5. Dr. Suryankant Sawant
Scientist, Tata Consultancy Services Limited
6. Dr. Aditya Gupte
Research Fellow, Hong Kong Polytechnic University
7. Prof. Akhil Masurkar (Assistant Professor, Vidyalankar Institute of Technology, Mumbai)
8. Dr. Rajat Shinde
Computer Scientist, NASA-IMPACT, USA
9. Dr. Sangita Chaudhari
Professor, RAIT
10. Dr. ManiMala Mahanto
Associate Professor, Shah & Anchor Kutchhi Engineering College
11. Dr. Ujwala Bhargale
Research Fellow, London South Bank University

Course Contents

- Introduction to Geospatial Computing
- Geospatial Data Acquisition: Remote Sensing, LiDAR, and GPS
- Geospatial Data Processing: Techniques for Raster, Vector, and LiDAR Analysis
- Geographic Information Systems (GIS) and its Tools
- Geospatial Data Visualization and Big Geospatial Data Analytics
- Geospatial Data Analysis Using Satellite Imagery and Its Applications
- GeoAI: Machine Learning & Deep Learning for Geospatial Analytics
- Multispectral and Hyperspectral Data Processing
- Security and Privacy in Geospatial Computing
- Geospatial Computing in Agriculture
- Natural Language Processing (NLP) Using Geospatial Data and Its Applications
- Advanced Applications of Geospatial Computing
- The Future of Geospatial Computing: Trends and Innovations

15 DISTINGUISHED ALUMNI



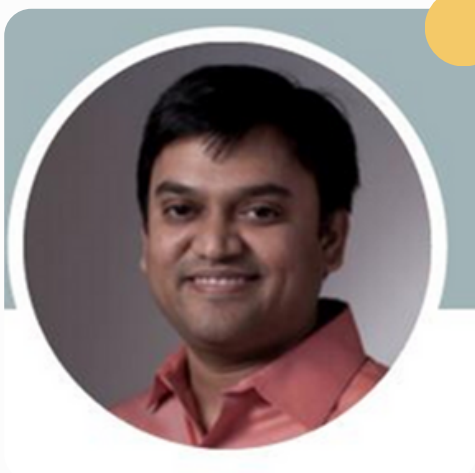
Mr. Kaustubh Mhatre
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technologies
1997 batch



Mr. Suvir Davda
Director HSBC Global
Marketing
2002 batch



Mr. Jairam Muthreja
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2002 batch



Mr. Nishit Shah
Director, Product
Manager, Google
2003 batch



Mr. Arjun Vaziranii
Innovation Manager,
Capegemini
2008 batch



Mr. Anil Harwani
Sr. Field Application
Engineer, AMD
2010 batch

15 DISTINGUISHED ALUMNI



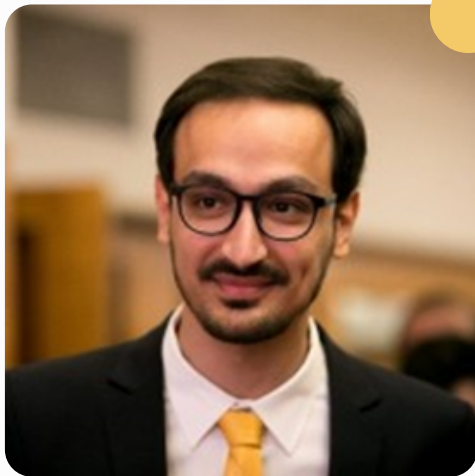
Mr. Mahesh Nair
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Hiranandani**
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Mr. Sandeep Makhija
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Wermanity
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**Mr. Sumeet
Bhambhwani**
Client Director,
MetrixLab
2012 batch



Mr. Aditya Shete
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