



MSIT CSE

N E W S L E T T E R



TECHNOPULSE

This newsletter showcases the achievements of the Computer Science Department (NBA Accredited) of Maharaja Surajmal Institute of Technology.

The CSE Department has published numerous journal entries, patents, articles, books and research on various topics from all the fun and educational events organized by the department faculty, students and societies.

INSIDE THIS ISSUE

- **Student Achievements**
- **Faculty Achievements**
- **Global Achievements**
- **PHD/Thesis Completions**
- **Event Gallery**



OUR VISION

To maintain academic excellence aiming to produce competent technocrats imbued with ethical values to serve the national emerging technological needs.



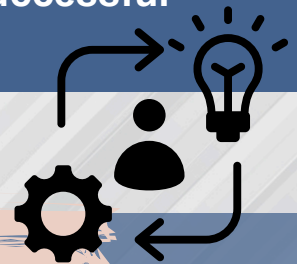
OUR MISSION

To impart quality education to the students by providing effective teaching, learning, research, and application based innovative environment. To include creativity, team-spirit, leadership and ethical competence through continuous collective curricular, co-curricular and extracurricular activities.



PROGRAM EDUCATIONAL OBJECTIVES

- To acquire a deep insight in mathematical, scientific & analytical skills and adopt self-motivating lifelong learning to explore cutting edge technologies.
- To prepare graduate to meet the evolving technological needs of the country by promoting innovation, ethical practice and a commitment to serving society.
- To acquire necessary technical knowledge to pursue successful professional career posing leadership and team spirit.



PROGRAM SPECIFIC OUTCOMES

- Ability to demonstrate the comprehended fundamentals of computer engineering to resolve mathematical and computation problems.
- Ability to explore evolutionary changes in computing by skills acquired through computer engineering principles and provide solutions through innovative ideas.
- Ability to imbibe knowledge in modern computer environments and languages to gain additional skills for a successful career and higher studies.

STAR ACHIEVER

SAKSHAM

Elite
NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
SAKSHAM ARORA
for successfully completing the course
Programming in Java

with a consolidated score of **85** %

Online Assignments	24.88/25	Proctored Exam	59.99/75
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Total number of candidates certified in this course: **15570**

Jul-Oct 2024
(12 week course)

TOPPERS
1%

Indian Institute of Technology Kharagpur

swayam
FREE ONLINE EDUCATION
एकदम सही, जगद हीरो

Roll No: NPTEL24CS105S550905678 To verify the certificate No. of credits recommended: 3 or 4



Saksham Arora has achieved a remarkable feat by securing 85% in the Programming in Java course by NPTEL (Jul-Oct 2024), placing him among the top 1% of learners. His outstanding performance reflects his deep expertise in Java and unwavering commitment to excellence.

STAR ACHIEVER

HARSHIKA



HARSHIKA Drall, Enrollment no.- 20415002722, 6th Semester, CSE-2 achievements for the 2024-25 session till now:

Inter IPU 2024 (15th Oct - 20th Oct 2024)

- First place in Girls Badminton
- Second place in Discus Throw

Sports Meet 2025 (27th Jan - 28th Jan 2025)

- First place in Discus Throw
- Second place in Shot Put
- Second place in Javelin Throw
- Second place in 4x200m Girls Relay Race
- Second place in Girls Tug of War

Second place in SYNAPSE '24 (Basketball Tournament for Women) at Maulana Azad Medical College (3rd Oct - 7th Oct 2024)

ALUMNI ACHIEVER

KARTIKAY



Kartikay Arya, a distinguished alumni of batch 2019-2023, CSE, 2nd shift, AMAS Training's 68th Batch, has achieved the remarkable feat of securing All India Rank 1 in the SSC Navy IT examination. Kartikay's journey exemplifies dedication and excellence, having been recommended by the 33 Service Selection Board (SSB) Bhopal on October 16, 2024.

ACHIEVEMENTS

FACULTY



Dr. Ravi Choudhary has been awarded Ph.D from Delhi Technological University (DTU). The topic of his thesis was 'Design of a suitable controller for automatic generation control of multi-area power system'



Dr. Vinita Rohilla and Dr. Rinky Dwivedi along with students Nandini Motwani, Aryan Sethi and Chetan Thakral have been awarded "Best Paper Award" for paper titled "Automated Resume Screening using NLP" in the National Conference on "Recent Trends in Climate Change, Energy and Sustainability".



Dr. Koyel Datta Gupta, Professor, Vidwan ID-240950, as Convener, organized the two-day National Conference on "Recent Trends in Climate Change, Energy, and Sustainability" (NCRTCES 2024) on 11th – 12th November 2024 at MSIT, co-sponsored by the Ministry of Earth Sciences, Government of India.

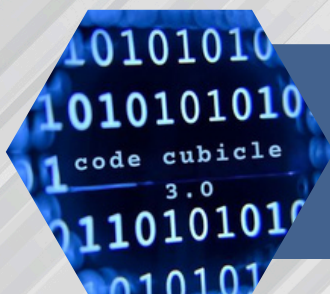
ACHIEVEMENTS

ACADEMIC



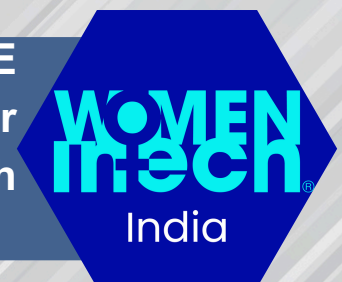
Meet Arora of 3rd year was among Top 25 contributors in GSSoC'24 during 10/05/24-10/08/24.

Aditya Kumar Organized Code Cubicle 3.0 Hack at Mastercard's office in Gurugram on 21 Sept 2024.



Aditya Kumar of 3rd year Organized Code Cubicle 2.0 Hackathon at Microsoft's office in Gurugram on 3rd Aug 2024.

Harshita Gupta, 3rd year, CSE morning shift completed a one year program - Women in Tech (WIT) Batch II in November 2024.



Shaurya Mishra of 3rd year was appointed Mentor/Judge at Hackarcade Hackathon held at Coding Blocks, Noida during 09/09/2024-10/09/2024.



Harshika Drall of 3rd year won First position in HACKWITH DELHI held at G.L Bajaj Institute of Technology and Management, Gr. Noida on 5/10/2024.

Shivam Kaushik of 3rd year won 2nd position in CODE4CAUSE 2.0, conducted at Netaji Subhash University of Technology, Dwarka on 7-8/ 9/2024.



Anoushka Gupta from CSE 2nd Shift, 5th semester secured SWE Internship at GOOGLE with a stipend of Rs. 1.25 lakh per month.

Meet Arora of 3rd year was Mentor for GSSoC'24 Extd during 01/10/24-10/11/24.



Harshika Drall of 6 sem, CSE-2, was mentor/Judge at CODE4CAUSE 2.0 Hackathon at NSUT (7th Sept - 8th Sept 2024).



Saurav Rawat of BTech CSE-E final year, MSIT with his teammates took home the win at the HackWithInfy Finale at Infosys Pune DC.

Harshita Gupta, 3rd year, CSE morning shift is selected as Google Developer Student Club LEAD, MSIT chapter and is wished best of luck for re-establishing the society on the campus.



Shaurya Mishra of 3rd year was appointed as Mentor/Judge at Technical Hackathon Dev Bhoomi Uttarakhand University, Dehradun during 07/09/24-08/09/2024.

Avinash Thakur, Aditya Gupta, and Prapti Prajapati, students from the CSE-E 7th Sem, have emerged as the national winners of the ZS Campus Beats Tech Challenge '24.



JOURNALS

- **Naresh Kumar, Professor, Vidwan ID - 241001**

Paper Name: Blockchain - Powered Search Engine Optimization.

Journal Name: Nanotechnology Perceptions, December 2024,
(Scopus)

- **Sonia Rathee, Associate Professor, Vidwan ID - 241006**

Shalu, Assistant Professor, Vidwan ID - 241002

Amita Yadav, Associate Professor, Vidwan ID - 241017

Geetika Dhand, Associate Professor, Vidwan ID - 240999

Paper Name: Empowering Immediate Healthcare Insights: A Deep Learning Chatbot with Modified-CNN and SA-MGO Optimization.

Journal Name: International Journal of Embedded Systems, December 2024, (ESCI, Scopus)

JOURNALS

- **Naresh Kumar, Professor, Vidwan ID - 241001**

Paper Name: Effect of Web3 on Search Engine.

Journal Name: Journal of Electrical Systems, December 2024,
(Scopus)

- **Shaily Malik, Assistant Professor, Vidwan ID - 240998**

Nishtha Jatana, Associate Professor, Vidwan ID - 241879

Amita Yadav, Associate Professor, Vidwan ID - 241017

Vaani Garg, Assistant Professor

Paper Name: DEEP NON-NEGATIVE MATRIX
FACTORIZATION MODEL FOR CLUSTERING-BASED IMAGE
DENOISING.

Journal Name: Proceedings on Engineering Sciences, August
2024, (Scopus)



JOURNALS

- **Geetika Dhand, Associate Professor, Vidwan ID - 240999, Kavita Sheoran, Associate Professor, Vidwan ID - 241003**

Paper Name: HEART DISEASE PREDICTION USING MACHINE LEARNING CLASSIFIERS WITH VARIOUS BALANCING TECHNIQUES.

Journal Name: Proceedings on Engineering Sciences, December 2024, (Scopus)

- **Naresh Kumar, Professor, Vidwan ID - 241001**

Paper Name: Optimizing Keyword Search For Search Engines Using Blockchain Technology.

Journal Name: Proceedings on Engineering Sciences, December 2024, (Scopus)

- **Priyanka Nandal, Associate Professor, Vidwan ID - 241004**

Paper Name: Super-resolution of medical images using real ESRGAN.

Journal Name: IEEE Access, December 2024, (SCI)



JOURNALS

- **Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Paper Name: Integrating Radial Basis Networks and Deep Learning for Transportation.
Journal Name: Open Transportation Journal, October 2024, (Scopus)
- **Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Paper Name: Enhancing Large-Diameter Tunnel Construction Safety with Robust Optimization and Machine Learning Integrated into BIM.
Journal Name: The Open Civil Engineering Journal, October 2024, (Scopus)
- **Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Paper Name: Utilizing Multi-layer Perceptron for Esophageal Cancer Classification Through Machine Learning. Methods Optimization and Machine Learning Integrated into BIM.
Journal Name: The Open Public Health Journal, October 2024, (October 2024), (Scopus)



JOURNALS

- **Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Paper Name: Advancing Tunnel Construction Reliability with Automated Artificial Intelligence under Geotechnical and Aleatoric Uncertainties.
Journal Name: The Open Civil Engineering Journal, October 20024, (Scopus)
 - **Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Vikrant Shokeen, Assistant Professor, Vidwan ID - 241187
Paper Name: Meta-learning for real-world class incremental learning: a transformer-based approach.
Journal Name: Scientific Reports, October 2024, (SCI)
 - **Naresh Kumar, Professor, Vidwan ID- 241001**
Paper Name: SecureVision: Advanced Cybersecurity Deepfake Detection with Big Data Analytics.
Journal Name: Sensors, September 2024, (SCIE)
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JOURNALS

- **Sandeep Kumar, Associate Professor, Vidwan ID - 241013**

Paper Name: Deep Learning and MRI Biomarkers for Precise Lung Cancer Cell Detection and Diagnosis.

Journal Name: The Open Bioinformatics Journal, September 2024, (Scopus)

- **Kavita Sheoran, Associate Professor, Vidwan ID - 241003**

Paper Name: SENSE: software effort estimation using novel stacking ensemble learning.

Journal Name: Innovations in Systems and Software Engineering, September 2024, (Scopus)

- **Geetika Dhand, Associate Professor, Vidwan ID - 240999**

Kavita Sheoran, Associate Professor, Vidwan ID - 241003

Vaani Garg, Associate Professor, Vidwaan ID - 438031

Shaily Malik, Assistant Professor, Vidwan ID - 240998

Divya Jatain

Paper Name: Tri-factorized Modular Hypergraph Autoencoder for Multimodal Semantic Analysis.

Journal Name: SN Computer Science, September 2024, (Scopus)

JOURNALS

- **Sonia Rathee, Associate Professor, Vidwan ID - 241006**

Shalu, Assistant Professor, Vidwan ID - 241002

Amita Yadav, Associate Professor, Vidwan ID - 241017

Dinesh Sheoran

Paper Name: Advanced Epileptic Seizure Detection Using Deep Learning and Bayesian Optimization.

Journal Name: SN Computer Science, September 2024, (Scopus)

- **Naresh Kumar, Professor, Vidwan ID - 241001**

Paper Name: Cyber Security Focused Deepfake Detection System Using Big Data.

Journal Name: SN Computer Science, August 2024, (Scopus)

- **Nishtha Jatana, Associate Professor, Vidwan ID - 241879**

Paper Name: Predicting Stroke Risk: An Effective Stroke Prediction Model Based on Neural Networks.

Journal Name: Journal of Neurorestoratology, September 2024, (ESCI, Scopus)

JOURNALS

- **Nishtha Jatana, Associate Professor, Vidwan ID - 241879**
Paper Name: Proposing and Optimizing COVID-19 Predictions: A Comprehensive Ensemble Approach for Time Series Forecasting in India.
Journal Name: SN Computer Science, August 2024, (Scopus)
- **Nishtha Jatana, Associate professor, Vidwan ID - 241879**
Paper Name: Adaptive Prefix Filtering for Accurate Code Clone Detection in Conjunction with Meta-Learning.
Journal Name: SN Computer Science, August 2024, (Scopus)
- **Nishtha Jatana, Associate professor, Vidwan ID - 241879**
Paper Name: Transient Empirical Machine Learning Models-Based Bitcoin Price Prediction Using High and Low Values.
Journal Name: Recent Advances in Computer Science and Communications (Formerly: Recent Patents on Computer Science), August 2024, (Scopus)

CONFERENCES

- **Dr. Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Paper Name: Exploring the Role of Machine Learning in Advancing the Sustainable Development Agenda.
Conference Name: NCRTCES
Date: 11-11-2024 to 12-11-2024
- **Dr. Sandeep Kumar, Associate Professor, Vidwan ID - 241013**
Paper name: Adaptive Mobile Traffic Forecasting Model (IWOPM).
Conference Name: NCRTCES
Date: 11-11-2024 to 12-11-2024
- **Dr. Vikrant Shokeen, Assistant Professor, Vidwan ID - 241187**
Dr. Sandeep Kumar, Associate Professor, Vidwan ID - 241013
Paper Name: Sequential Feature Extraction Transformer Network for Taxonomic Protein prediction.
Conference Name: NCRTCES
Date: 11-11-2024 to 12-11-2024
- **Dr. Vimal Gaur, Associate Professor, Vidwan ID - 241010**
Paper Name: TeachWise: Educational Assistance with Multilingual Capabilities
Conference Name: NCRTCES
Date: 11-11-2024 to 12-11-2024



FDP

- **Dr. Geetika, Dr. Kavita, Dr. Savita, Dr. Vimal, Dr. Sangeeta, Dr. Shaily, Dr. Poonam, Dr. Parul, Ms. Jyoti** attended one week Faculty development Program "Modeling and Simulation Using MATLAB" organized by NITTTR from 16th December to 20 December 2024.
 - **Dr. Koyel Datta Gupta, Dr. Sandeep, Dr. Vikrant** attended one week Faculty Development Program "Building Web Development Solutions with Cloud Computing" organized by AICTE and Edunet from 17th September to 21 September 2024.
 - **Dr. Amita, Dr. Shalu** attended two week Faculty Development Program "NEP orientation and Sensitization Programme" organized by MMTTC from 4th December to 13th December 2024.
 - **Dr. Amita, Dr. Shalu, Dr. Sonia Rathee** attended one week FDP "Medical Imaging in the Third Dimension: Advanced Techniques and Clinical Applications" organized by ATAL from 16th December to 21 December 2024.
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FDP

- **Dr. Sangeeta, Mr. Sushil, Dr. Anshul Pareek, Dr. Parul Chaudhary, Ms. Jyoti** attended one week Faculty development Program “Developing Health Work Culture at Work Place” organized by NITTTR from 2nd December to 6th December 2024
 - **Dr. Poonam, Dr. Ansul Pareek** attended one week Faculty development Program “Cross-Modality Innovation: Generative AI in Language, Image Intelligence and Medical Advancements” organized by ATAL from 9th December to 14th December 2024.
 - **Ms. Jyoti** attended one week Faculty Development Program “Recent Technologies in Machine Learning & Security” organized by JIMS from 29th July to 2nd August 2024.
 - **Ms. Indu and Dr. Medhavi Malik** attended one week Faculty Development Program on Cryptography and Network security organized by NITTTR from 16th September to 20 September 2024.
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FDP

- **Ms. Indu and Dr. Medhavi Malik** attended one week Faculty Development Program on Integrating Generative AI, Cloud and Ethical Frameworks for Academia and Research Innovation organized by ATAL from 16th December to 21st December 2024.

BOOKS

- **Mr. Naresh Kumar, Professor, Vidwan Id - 241001**

Book name: Emerging Threats and Countermeasures in Cybersecurity.

Chapter name: Revolutionizing SEO: Exploring the Synergy of Blockchain Technology and Search Ecosystems, (Scopus)

INDUSTRIAL VISIT

DTU



- The industrial visit to Delhi Technological University (DTU) on September 25, 2024, provided students with valuable insights into cutting-edge research in electric vehicles (EVs), biodiesel production, and entrepreneurial incubation. A team of 31 students, accompanied by faculty members, explored three major labs.
- The Electric Vehicles and Related Technologies Lab focuses on EV advancements like battery innovation, power electronics and vehicle-to-grid (V2G) technology. The Biodiesel Research Lab is dedicated to alternative fuels, working on efficient production methods and international collaborations. The DTU-Incubation and Innovation Foundation supports startups in AI, clean energy and sustainable transport.
- Key takeaways included exposure to advanced research, hands-on learning and the role of sustainability in technological advancements. The visit inspired students to apply their knowledge to real-world challenges and entrepreneurial ventures.

EVENTS

NCRTCES 2024



Dr. Koyel Datta Gupta, department of CSE organized the two-day National Conference on "Recent Trends in Climate Change, Energy, and Sustainability" (NCRTCES 2024) on 11th–12th November 2024 at MSIT, co-sponsored by the Ministry of Earth Sciences, Government of India. The event brought together experts, scholars and students to explore innovative solutions in climate change, energy management and sustainability, with a focus on AI-driven advancements and interdisciplinary collaboration. It also promoted eco-friendly practices, encouraging sustainable alternatives and action-oriented approaches to global environmental challenges.

EVENTS

IMC'24



The Department of CSE participated in the India Mobile Congress (IMC) 2024, held from 15th–18th October at Pragati Maidan, New Delhi. Co-organized by the Department of Telecommunications (DoT) and COAI, the event focused on 5G, 6G, AI and sustainable telecommunications. Prime Minister Narendra Modi inaugurated the event, highlighting India's advancements in 5G and its 6G roadmap. Industry leaders, including Sunil Bharti Mittal and Mukesh Ambani, discussed AI-powered 5G and digital inclusion. Exhibitions showcased innovations from Ericsson, Qualcomm, and Samsung, reinforcing India's role as a global telecom leader.

GALLERY





CHIEF EDITOR

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Dr. Nishtha Jatana (HOD CSE, 2nd Shift)

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