



MSIT CSE NEWSLETTER

JUL-DEC 2023



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TECHNOPULSE

This Newsletter showcases the achievements of the Computer Science Department of Maharaja Surajmal Institute of Technology.

The CSE Department has published numerous journal entries, patents, articles, books, and research on various topics from all walks of life. It also includes all the fun and educational events that were organized by the department faculty, students, and societies.

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 evolve as responsible citizen having sense of ethics and environment aware attitude.
- 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 solution through innovative ideas.
- Ability to imbibe knowledge in modern computer environment and languages to gain additional skills for successful career and higher studies.

STUDENTS' ACHIEVEMENTS

- Priyanshi of CSE-2, 4th Sem, received a medal in NCC PM rally, 2023.
- Harshita Gupta of CSE-1 3rd sem has been selected as one of the top 60 women engineering students in Women in Tech Program Batch II, held in November 2023.
- Akshay kr. Sharma of CSE-1 3rd sem secured first position in Project exhibition PROJEEXON held on 25th November 2023 conducted by IOSC-BVP.
- Akshay kr. Sharma of CSE-1 3rd sem has been selected to be a part of CLUMOSS as Full Stack Developer position on 17th November 2023.
- Akshay kr. Sharma of CSE-1 3rd sem has been selected as student ambassador by Microsoft Learn Student Ambassadors 2023.
- Akshay kr. Sharma of CSE-1 3rd sem has been selected for mentoring the participants of HackUnicorn2.0 from 19th-22nd October, 2023 organized by Hack Unicorn.

STUDENTS' ACHIEVEMENTS

- Ujjwal Singh, Nitin Kumar of CSE-1 5th sem and Harshit Kumar Singh of CSE-4 3rd sem were selected as winners of dramatics-one act prelims in Zone-4 ANUGOONJ at Trinity Dwarka held on 9th and 10th October, 2023.
- Manas Chopra and Nikita Bhatia of CSE-4 3rd sem secured top 10 position in Hustle X 1.0 conducted by WaysAhead Global Pte. Ltd. Singapore and IIM Lucknow-EIC held on 11th to 13th August 2023.
- Anshita Chaudhary, Nandini Motwani, Yash Bhardwaj and Bishwajeet Parhi of CSE-1 7th sem, hold second position in Smart India Hackathon 2023 held on 19th and 20th December' 2023 conducted by Ministry of Education, Govt. of India.
- Manav Ajai Sonkar of CSE-2 7th sem has been chosen as Business coach at Delhi Government's Business Blaster initiative.

STUDENTS' ACHIEVEMENTS

- Bhavya Dhingra, Vidhi Jain, Deepak Kumar Sharma, Koyel Datta Gupta, Deepika Kukreja," RLET: a lightweight model for ubiquitous multi-class intrusion detection in sustainable and secured smart environment", published in International Journal of Information Security, Springer, Issue 1, ISSN 1615-5262, on 18 August, 2023. <https://doi.org/10.1007/s10207-023-00739-2>.
- Arpit Bajgoti, Rishik Gupta, PRASANALAKSHMI Balaji, Rinky Dwivedi, Meena, Deepak Gupta, "Swin Anomaly: Real-Time Video Anomaly Detection Using Video Swin Transformer and SORT", published in IEEE Access, Volume 11, ISSN 21693536 on 4th October, 2023. doi: 10.1109/ACCESS.2023.3321801.
- Vimal Gaur, Shivam, Rishabh Bhatt, Shivansh Tripathi, "Enhancing Student Feedback Analysis: A hybrid Approach utilizing Machine Learning and Lexicon-Based Methods for Sentiment-Analysis" published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Tushar Ojha, Vaibhav, Krishan Yadav, Anshika Gupta, Koyel Datta Gupta, "Blockchain based AI Yoga Assistant" published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Sonia Rathee, Aditi Diksha, Aman Gupta, Ankur Badola, "Blockchain Technology-based Messenger", published in MSIT Journal of Research-Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Sapna Malik, Jyoti, Surender Singh, Saksham Arora, "Indian Sign Language Recognition using Machine Learning", published in MSIT Journal of Research Satyam, ISSN: 2319-7897, on 6th September, 2023. <https://www.msit.in/magazines>.

STUDENTS' ACHIEVEMENTS

- Sapna Malik, Disha Katyal, Naman Sachdeva, Nihal Gupta “Career Guidance AI Counsellor”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Rinky Dwivedi, Jivitesh Sabharwal, Apoorva Singh, Himanshu Jha, “Quantitative Analysis and Ensemble Learning Based Predictive Modelling of Taxi Trip Duration In New York City”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Kavita Sheoran, Priyaansh Malik, Pratyush Jha, Mayank Sharma, “Motion Control: Camera-Based Body Movement Input Device Simulation”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Nishtha Jatana, Nishant Sharma, Kunal Bisht, Hardik, “Digitalizing Warrantly Using Blockchain Technology”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Savita Ahlawat, Sangeeta, Shivam, Saiyam Jain, Surya Prakash Gupta, “Multimodal Emotion Detection”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Mansi Gautam, Rinky Dwivedi, Jindagi kumari, “Data Exploration on World Bank Dataset of G20 Countries”, published in MSIT Journal of Research Satyam, ISSN: 2319-7897, on 6th September, 2023. <https://www.msit.in/magazines>.
- Amita Yadav, Yashi Shukla, “Real Time Object Measurement and Detection”, published in MSIT Journal of Research Satyam, ISSN: 2319-7897, on 6th September, 2023. <https://www.msit.in/magazines>.

STUDENTS' ACHIEVEMENTS

- Geetika Dhand, Sukant Thakur, Amitesh Kumar, Brijesh Kumar, “Audio Noise Reduction and Video Transcription”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Sushruta Mishra, Dayal Rohan Volety, Navdeep Bohra, Sultan Alfarhood, Mejdil Safran, “A smart and sustainable framework for millet crop monitoring equipped with disease detection using enhanced predictive intelligence”, Published in Elsevier, ISSN: 1110-0168, on 1st November, 2023. <https://doi.org/10.1016/j.aej.2023.10.041>.
- Savita Ahlawat, Sangeeta, Gitali, SuryaPrakash, Shivam, “Multimodal Emotion Detection”, published in MSIT Journal of Research- Satyam, Special Issue, ISSN: 2319-7987, on 2nd November, 2023. <https://www.msit.in/magazines>.
- Rahul Ahlawat, Sachin Adlakha, Medhavi Malik, Nishtha Jatana, “Action and gesture recognition using Deep learning for deaf and dumb people”, 5th International Conference on Information Management & Machine Intelligence (ICIMMI 2023)” held during 14th-16th December 2023. <https://www.icimmi.poornima.org/>
- Indu, Ajin Jose, Chirag Sharma, Gaurav Kumar, “Impact Chain: Blockchain-Based Charitable Donations: A Transparent Approach to Empowering Philanthropy”, published in MSIT Journal of Research Satyam, ISSN: 2319-7897, on 6th September, 2023. <https://www.msit.in/magazines>.
- Savita Ahlawat, Sachin Kumar Baghel, Amit Choudhary, Chander Shekhar, “Blockchain-Based Fundraiser for Public Welfare”, published in MSIT Journal of Research Satyam, ISSN: 2319-7897, on 6th September, 2023. <https://www.msit.in/magazines>

STAR ACHIEVERS



- Ayushi Gahlot of CSE-1 5th sem hold first position in Team Demo in 24th RSFI National Rope Skipping Championship 2023 held from 29th September to 2nd October 2023.
- Ayushi Gahlot of CSE-1 5th sem hold third position in double Dutch par speed in 24th RSFI National Rope Skipping Championship 2023 held from 29th September to 2nd October 2023.

STAR ACHIEVERS



- Our student Mr. Manav Ajai Sonkar from CSE 4th year has been selected as a business coach at Delhi Government's Business Blasters Program and has been named under India's 100 Future Leaders for two of his startups- Crowdfеuz & Sibilize.

Recently, he was also felicitated by his excellency, 14th president of India, Mr. Ram Nath Kovind.

STAR ACHIEVERS



- Gauri Agarwal, from CSE Department, stood as the university gold medalist with a CGPA of 9.71 for the batch of 2019-2023
- “I am honored and thrilled to be the Gold Medalist in B.Tech Computer Science from GGSIPU, thanks to the invaluable support from my parents and teachers. Transitioning from the IT stream to becoming a topper in my college, then advancing to CSE, and ultimately achieving university-wide recognition has been an incredible journey.” - Gauri Agarwal

JOURNALS

- **Dr. Kavita Sheoran, Associate Professor, Vidwan ID- 241003, Dr. Geetika Dhand, Associate Professor, Vidwan ID- 240999**
"Exploring the relationship between air quality index and lung cancer mortality in India: predictive modeling and impact assessment"
Scientific reports, vol. 13, pp. 1- 12, Nov 2023,IF 4.9, (SCIE).
- **Dr. Koyel Datta Gupta, Professor, Vidwan ID – 240950**
"Fuzzy Controller-empowered Autoencoder Framework for anomaly detection in Cyber Physical Systems,"
Computers and Electrical Engineering, Vol. 108, pp. 108685, 2023, IF - 4.3 (SCIE).
- **Dr. Koyel Datta Gupta, Professor, Vidwan ID – 240950**
"Glioma resection cavity segmentation on neuroimaging using AI-based fuzzy enhancement with modified unet,"
Applied and Computational Mathematics, vol. 22, no. 3, pp. 338–354, 2023, IF-10 (SCIE).
- **Ms. Gunjan Beniwal, Assistant Professor, Vidwan ID-243313**
"Memoization based priority-aware task management for QoS provisioning in IoT gateways,"
Journal of Ambient Intelligence and Smart Environments 15 381–399, Dec 2023, IF-1.7 (SCIE).
- **Dr. Nishtha Jatana, Associate Professor, Vidwan ID- 241879**
"Fault Coverage-Based Test Case Prioritization and Selection Using African Buffalo Optimization" Computers, Materials & Continua, 74(3) (SCIE).
- **Dr. Nishtha Jatana, Associate Professor, Vidwan ID- 241879, Dr. Divya Jatana, Assistant Professor, Vidwan ID- 241008**
"A Severity Assessment of Python Code Smells",
published by IEEE Access, (SCIE).
- **Dr. Kavita Sheoran, Associate Professor, Vidwan ID- 241003, Dr. Geetika Dhand, Associate Professor, Vidwan ID- 240999, Dr. Parul Chaudhary, Assistant Professor, Vidwan ID- 243353**
"A secure routing protocol using hybrid deep regression based trust evaluation and clustering for mobile ad-hoc network"
Peer-to-Peer Networking and Applications, vol. 16, pp. 2794-2810, Oct 2023,IF: 3.4, (SCIE).

JOURNALS

- **Dr. Nishtha Jatana, Associate Professor, Vidwan ID- 241879**
“Analysis of Secure Data Sharing Techniques Using Blockchain” published by Fusion and Practice (Scopus).
- **Dr. Nishtha Jatana, Associate Professor, Vidwan ID- 241879**
“HELFF (Haptic Encoded Language Framework): a digital script for deaf-blind and visually impaired” *Universal access in the information society*, 22(1), 121-131 (SCIE).
- **Dr. Ravi Chaudhary, Assistant Professor, Vidwan ID- 243397**
“FOPTID+1 controller with capacitive energy storage for AGC performance enrichment of multi-source electric power systems” published by Electric Power Systems Research, (SCI)
- **Dr. Vikrant Shokeen, Assistant Professor, Vidwan ID- 241187**
“Segmentation and validation of lung cancer images by using Artificial Intelligence” *Journal of Data Acquisition and Processing*. Vol 38(2) PP 5079-5091 2023 (SCOPUS).
- **Dr. Divya Jatain, Assistant Professor, Vidwan ID- 241008,**
Dr. Naveen Dahiya, Professor, Vidwan ID- 241950
An exploration of the causal factors making an online course content popular & engaging, *International Journal of Information Management Data Insights*, Volume 3, Issue 2, 2023, 100194, ISSN 2667-0968, <https://doi.org/10.1016/j.ijime.2023.100194> (SCIE).
- **Dr. Shalu, Assistant Professor, Vidwan ID- 241002,**
Dr. Sonia Rathee, Assistant Professor, Vidwan ID- 241006,
Dr. Amita Yadav, Associate Professor, Vidwan ID- 241017,
Dr. Pooja Kherwa, Assistant Professor, Vidwan ID- 243726
“An Intelligent Lane and Obstacle Detection using YOLO algorithm ”, *Int Journal of Intelligent Systems and Applications in Engineering*, vol. 12, no. 3s, pp. 641–648, Nov. 2023, (Scopus).

BOOKS / BOOK CHAPTERS

- **Dr. Sangeeta, Associate Professor, Vidwan ID- 241009**
published a book entitled “Future Perspectives of Machine Translation for Indian Languages”, 2023, ISBN No.- 9789394336261.
- **Dr. Sandeep Kumar, Associate Professor, Vidwan ID- 241013**
published a book chapter entitled “Smart Rural Structures Using IoT and Cloud Computing”, in book titled 'Integration of Cloud Computing with Emerging Technologies, ISBN No. ISBN9781003341437' with CRC Press.
- **Dr. Vikrant Shokeen, Assistant Professor, Vidwan ID- 241187**
published a book chapter entitled “Smart Rural Structures Using IoT and Cloud Computing”, in book titled 'Integration of Cloud Computing with Emerging Technologies, ISBN No. ISBN9781003341437' with CRC Press.

PATENTS

- **Dr. Kavita Sheoran, Associate Professor, Vidwan ID- 241003**
Dr. Nishtha Jatana, Associate Professor, Vidwa ID- 241879,
Dr. Geetika Dhand, Associate Professor, Vidwan ID- 240999,
Dr. Shaily Malik, Assistant Professor, Vidwan ID- 240998,
Dr. Divya Jatain, Assistant Professor, Vidwan ID- 241008,
Ms. Vaani Garg, Assistant Professor
has been granted a patent entitled “Compact Electronic Single Braille” with patent no. 202311007354.
- **Dr. Vikrant Shokeen, Assistant Professor, Vidwan ID- 241187**
has been granted a design patent titled “Hexapedal Robot Manager for Hospitality Industry” with design no- 359760-001.
- **Dr. Sandeep Kumar, Associate Professor, Vidwan ID- 241013**
has been granted a design patent titled “IOT Enabled Therapeutic Machine” with design no- 372303-001.

PAPERS PRESENTED

- Dr. Medhavi Malik, Assistant Professor, presented a conference paper, “Using Fuzzy Logic Matching Algorithm for Hindi Dataset” in (ICECTASET-2023) in August 2023.
- Dr. Medhavi Malik, Assistant Professor, presented a conference paper, “Discounts Based Cloud Resource Management Using Cloud Broker” in (RAiSE-2023) in October 2023.
- Dr. Nishtha Jatana, Associate Professor, Vidwan ID- 241879,
Dr. Medhavi Malik, Assistant Professor, presented a conference paper, “Action and gesture recognition using Deep learning for deaf and dumb people” in the “5th International Conference on Information Management & Machine Intelligence (ICIMMI 2023) held during December 2023.
- Dr. Sandeep Kumar, Associate Professor, Vidwan ID- 241013, presented a paper “Detection of Counterfeit Currency Notes through Machine Learning Algorithms and Image Processing” in 3rd International Conference (ICTACS-2023, IEEE), November 2023
- Dr. Vikrant Shokeen, Assistant Professor, Vidwan ID- 241187, presented a paper “Detection of Counterfeit Currency Notes through Machine Learning Algorithms and Image Processing” in 3rd International Conference (ICTACS-2023, IEEE), November 2023.
- Dr. Amita Yadav, Associate Professor, Vidwan ID- 241017,
Dr. Sonia Rathee, Assistant Professor, Vidwan ID- 241006,
Dr. Shalu, Assistant Professor, Vidwan ID- 241002
presented a paper on “Automatic Text Summarization Using Recent Bert Architecture” in the 12th International Conference on Interdisciplinary Research for Sustainable Development, 25th December 2023.

FACULTY ACHIEVEMENTS

- **Dr. Sandeep Kumar, Associate Professor, Vidwan ID- 241013** has secured among 'Top 2%' of the successful candidates in the MOOC examination of 'Operating System Fundamentals'.
- **Dr. Vimal Gaur, Associate Professor, Vidwan ID- 241010** chaired a session at the International Conference on Artificial Intelligence: Theory and Applications (AITA-2023) on August 11-12, 2023.
- **Dr. Vimal Gaur, Associate Professor, Vidwan ID- 241010** has been commended for her role as a program committee member and reviewer at International Conference on Advances in Data Driven Computing and Intelligent Systems (ADICS 2023) on 21-23 September 2023.
- **Dr. Vimal Gaur, Associate Professor, Vidwan ID- 241010** has been commended for her role as a program committee member and reviewer at the International Conference on Intelligent Vision and Computing (ICIVC 2023) on 25-26 November 2023.
- **Dr. Vimal Gaur, Associate Professor, Vidwan ID- 241010** contributed as a reviewer at the International Conference on Computational Intelligence and Mathematical Applications (ICCIMA 2023) on 21-22 December 2023.

FACULTY PROMOTIONS

- Dr. Naveen Dahiya, Vidwan ID- 241950 is promoted as Professor in September 2023.
- Dr. Koyel Datta Gupta, Vidwan ID- 240950 is promoted as Professor in September 2023.
- Dr. Rinky Dwivedi, Vidwan ID- 241399 is promoted as Professor in September 2023.
- Dr. Naresh Kumar, Vidwan ID- 241001 is promoted as Professor in September 2023.
- Dr. Nishtha Jatana, Vidwan ID- 241879 is promoted as Associate professor in September 2023.
- Dr. Vimal Gaur, Vidwan ID- 241010 is promoted as Associate professor in September 2023.
- Dr. Sangeeta, Vidwan ID- 241009 is promoted as Associate professor in September 2023.
- Dr. Sapna Malik, Vidwan ID- 241007 is promoted as Associate professor in September 2023.

ALUMNI ACHIEVEMENT



Dr. Manisha Rathee, a part of Chandrayaan team, MSIT CSE Alumini, has ignited a new era of discovery and reminded us that the universe is vast, waiting for our footprints. Here's to the scientists, engineers, and everyone who made this mission a shining reality.



INDUSTRIAL VISIT

MARUTI SUZUKI, MANESAR, GURUGRAM



Students of CSE 6th Sem from Maharaja Surajmal Institute of Technology, under the guidance of faculty coordinators- Dr. Amita Yadav, Dr. Sonia Rathee and Ms. Vaani Garg, went on an Industrial visit to Maruti Suzuki Motorcycle Pvt Ltd, Manesar, Gurugram on 5th December, 2023. The purpose of the visit was to understand the intricate process of bike manufacturing, learn about safety protocols, delve into the history of Suzuki, and witness the evolution of their iconic bike models.

The highlight of the visit was the guided tour through Suzuki's state-of-the-art manufacturing facility. Students had the opportunity to witness firsthand the meticulous processes involved in bike production. From the assembly line to quality control measures, every step was elucidated, showcasing the precision and expertise involved in creating each bike.

The Suzuki team conducted a detailed session on safety do's and don'ts, enlightening the students on the crucial aspects of ensuring a safe work environment and the importance of adhering to safety standards in the automotive industry.

This visit marked an enriching and invaluable experience for the students of Maharaja Surajmal Institute of Technology. Witnessing the entire process of bike manufacturing, understanding the company's history, focusing on safety measures, and receiving insights into team dynamics within the company provided a comprehensive understanding of how a prominent company like Suzuki operates. This visit not only broadened the students' knowledge about the automotive industry but also highlighted the significance of teamwork, innovation, and adherence to safety standards in a corporate setting. Overall, the visit was deemed highly beneficial and worthy, offering a holistic view of how a renowned company like Suzuki operates.



INDUSTRIAL VISIT

DUCAT, PITAMPURA



Students of CSE Department, 2nd, under the guidance of faculty coordinators- Dr. Vikrant Shokeen & Dr. Medhavi Malik, embarked on an insightful industrial visit to Ducat Pitampura on 25th November, 2023. The visit encompassed a holistic experience, starting with an introduction to the center's entire team.

The highlight of the visit was the first session conducted by Krishna Kumar, a special trainer at Ducat Pitampura. Over the course of an hour, he delved into the realm of data analytics, emphasizing the importance of programming languages such as Python, C, CPP, and the emerging fields of AI, ML, DL, DS, and DA. He provided a comprehensive overview of the current market situation, including technical and non-technical statistics. The session was not only informative but also infused with examples and humor, creating an engaging atmosphere.



The technical session was followed by a personality development training conducted by Mrs. Neeti Gupta. The 1-hour session was dedicated to understanding the 3V's – Visual, Vocal, and Verbal aspects of personality. Furthermore, she shed light on crucial communication aspects like JAM (Just a Minute), GD (Group Discussion), and Debates.

The industrial visit to Ducat Pitampura was thus, a comprehensive experience, offering technical insights and personality development training to our students. The sessions by Krishna Kumar and Neeti Gupta contributed to a well-rounded understanding of both industry trends and essential soft skills. The visit proved to be not only educational but also enjoyable, leaving students with a valuable blend of knowledge and practical insights for their future endeavors.



EVENT GALLERY



GLIMPSE INTO OUR CAMPUS





Chief Editor-

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Dr. Nishtha Jatana (HOD CSE, Evening)

Editor-

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