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BYTE STREAM



COMPUTER SCIENCE AND ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY (ISM)
DHANBAD

MONTHLY NEWSLETTER

An Insight into the
Department of Computer
Science and Engineering,
IIT (ISM)



I do not fear computers.
I fear the lack of them.”

— Isaac Asimov

Udbhav 2025: Culture in Every Byte

On August 30th, the Department of Computer Science and Engineering hosted Udbhav 2025 at Penman auditorium from 4 pm. The ceremony transformed the department into a vibrant hub of celebration, reflection, and creative energy, as the best talents of the department showcased their craft. The event opened with a warm welcome to all attendees, as Prof. MK Singh, Dean Academic & Director (CD) (also the patron of CSES), and the chief guest of Udbhav'25, Shri Aditya Kumar Sinha (Executive Director, C-DAC Mumbai), along with Prof. Chiranjeev Kumar, HOD and President of CSES, Prof. Dharavath Ramesh, FIC of CSES, Prof. Pranay Kumar Saha, Treasurer of CSES and Mr. Aditya Vikram Chaudhary, Joint Secretary of CSES, took their place on the dais.

The gathering began with the lighting of the lamp and the invocation song, followed by Prof. Chiranjeev Kumar's gracious welcome. Prof. Dharavath Ramesh shared the vision of Udbhav, and Prof. Pranay Kumar Saha presented the society's financial proceedings. An engaging address by Prof. M.K. Singh preceded the inspiring speech of the Chief Guest, Shri Aditya Kumar Sinha, whose words left a lasting impression. The CSE Alumnus of the Year Award was conferred on Mr. Maheshwar Reddy Chennuru, after which Microsoft was named the best company of session 2024–25. The launches of BufferedReader 7.1, the SARC website, and the new identity of the magazine and newsletter division as CSETimes marked significant milestones. The formal segment closed with a vote of thanks by Mr. Anil Kumar, Vice President of CSES.



The cultural events that followed brought the evening alive with performances that celebrated the department's talent. Swaralipi crowned Kethamreddy Supreeth Sadhan (B.Tech, 2026) won the title of CSE Star Vocalist. This was followed by Nrityanjali (solo dance), winning Begari Jyothika (B.Tech, 2029) the title of CSE Dance Prodigy. Then, Siddharth Sanjay Srivastav (B.Tech, 2029), bagged CSE Talent Titan by winning CSE Got Talent. Aditya Ram Tiwari (B.Tech, 2029) became this year's CSE Instrumental Virtuoso by winning Raga Reprise. Aditya Vikram Chaudhary (B.Tech, 2027) was crowned the CSE Standup Sensation in Laugh Lines. The team led by Suryansh of B.Tech 2028, shined their way into becoming CSE Dance Dynasty in the group dance

event, Nrityamitra. The winners of art competitions- Chitrakala (drawing) by Prakhar Kanoujia, (B.Tech, 2029) and Rangkriti (rangoli) by Kumar Himanshu Raj and Team (PhD Scholars) were felicitated as well. The prize distribution concluded with awards for winners of Codessey 1.0, Codesshe 1.0, and Recruitathon 1.0.

Adding depth to the celebration, the society hosted Shri Mohit Jain, a distinguished alumnus from the batch of 2016, for a guest talk titled "From College to Corporate: What Really Matters." Sharing his entrepreneurial journey as co-founder of mCaffeine and Hyphen, he offered students candid insights into adaptability, entrepreneurship, and success beyond the classroom.

The day drew to a close with a photography session capturing the spirited teams of WebCSE, CSAI, CSETimes, SpeakUp, and CodeISM, along with faculty, core team members, and volunteers. These frames, rich with pride and camaraderie, stood as a tribute to the creativity and unity of the CSE Society. As the evening ended with joy and reflection, Udbhav 2025 became more than an event — it was a celebration of a community that codes, creates, and connects.





From College to Big Tech: Skills That Matter by Mr. A.K. Sinha

The Department of Computer Science and Engineering at IIT (ISM) Dhanbad recently had the honor of hosting Shri Aditya Kumar Sinha, Executive Director of the Centre for Development of Advanced Computing (C-DAC), Mumbai. What began as a formal visit soon evolved into an engaging session filled with meaningful discussion and reflection.

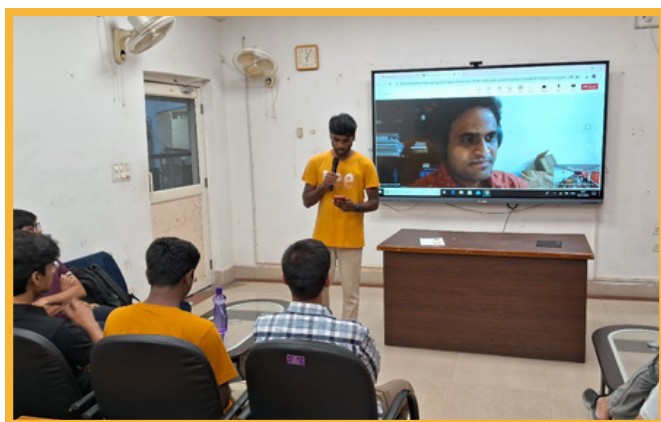
Shri Sinha interacted with faculty members on diverse research areas, including cybersecurity, AI, data science, networks, and advanced software systems. He listened attentively, asked insightful questions, and shared thoughtful perspectives. His emphasis on the future of technology was especially striking—highlighting quantum computing and theoretical computer science as fields deserving serious long-term investment. At the same time, he stressed responsibility in sensitive areas such as offensive security and the dark web, emphasizing that research must always balance innovation with ethics and national security.

He also offered a glimpse into the impactful work at C-DAC, from high-performance computing to digital innovations that drive national projects. He encouraged the department to engage through collaborative research, student training, and participation in mission-oriented programs.

The visit transcended mere formalities. It opened up promising opportunities for collaboration with C-DAC and reinforced the idea that the department's research can significantly contribute to national technological progress. The CSE Department looks forward to building on this connection and exploring the road ahead.



An Evening with Mr. Chennuru Maheswara Reddy - Engineering Cloud's Foundation



On August 8th, 2025, an alumni talk was delivered by Mr. Chennuru Maheswara Reddy, a distinguished alumnus who has graduated with a Dual Degree in Computer Science and Engineering in 2018. Currently, he is employed as a Senior Software Engineer at Kluisz.ai, with over seven years of experience in distributed systems.

Fascinating stories from his professional journey were shared, including the development of a patented on-device AI model at Samsung, which has been deployed across millions of devices, and his leadership of Oracle Cloud's Container Registry service, which is responsible for processing a trillion images every month.

The talk, titled "Engineering the Cloud's Foundation", was not

presented merely as a technical deep dive. Instead, it was framed to show how classroom concepts—such as virtual memory, process scheduling, concurrency, and databases—are applied directly to real-world systems. Cloud services like EC2, S3, and RDS were explained using simple, relatable examples, and the increasing reliance of modern companies on multi-cloud platforms

such as AWS, Azure, and Google Cloud was highlighted.

The three core components of cloud computing—computing, networking, and storage—were broken down clearly. Topics such as VLANs, the OSI model, encryption, and cryptography were also addressed, and were made accessible even to beginners. A key takeaway was emphasized: cloud computing is fundamentally about designing smart abstractions, and mastering foundational concepts is more critical than often assumed.

The session concluded with a lively Q&A, during which thoughtful questions were posed by the audience. Honest, detailed, and genuinely helpful responses were provided, leaving attendees with a clearer reflection on their own future paths.

Tech Talk by Mr. Mohit Jain at Udbhav 2025

The Department of Computer Science and Engineering, IIT (ISM) Dhanbad, had the privilege of hosting distinguished alumnus Shri Mohit Jain, Batch of 2016, as the Guest Speaker during Udbhav 2025. Mr. Mohit Jain, who co-founded the widely recognized brands mCaffeine and Hyphen has made remarkable contributions to the entrepreneurial landscape, growing businesses that cross over ₹500 crore in revenue. His illustrious journey, from the lecture halls of IIT (ISM) to being featured in the prestigious Forbes 30 Under 30 list at the age of 27, stands as a beacon of inspiration for aspiring students. Delivering a thought-provoking session titled “From College to Corporate: What Really Matters”, Mr. Mohit Jain shared invaluable insights drawn from his own professional and entrepreneurial experiences.

The talk highlighted the importance of cultivating confidence with balance, neither tipping into overconfidence nor succumbing to underconfidence. He urged students to embrace opportunities and take calculated risks, while also emphasizing the necessity of continuous learning and unlearning in rapidly evolving workspaces.

He reminded the audience that while smart work is indispensable, it can never substitute the foundation of hard work. Equally significant, he noted, is the role of failure in shaping success, often teaching lessons that triumphs cannot.

In addition to these guiding principles, Mr. Mohit Jain shed light on the core skill sets essential for thriving beyond academia, highlighting teamwork and leadership as key drivers of collective success. He also stressed the importance of strong decision-making abilities to navigate challenges effectively, along with presentation and articulation skills, which are crucial for transforming ideas into impactful actions.

The session struck a perfect balance between reflection and motivation, leaving the audience enriched with both practical advice and a renewed sense of ambition.



Expert Talk on “Human-Centric AI Guidance for Visual Analytics” by Dr. Arpit Narechania



On 22 August 2025, the Department of Computer Science & Engineering hosted an expert talk on “Human-Centric AI Guidance for Visual Analytics”, delivered by Dr. Arpit Narechania, Assistant Professor at the Hong Kong University of Science and Technology (HKUST).

Dr. Narechania earned his PhD in Computer Science from the Georgia Institute of Technology, USA, and a B.Tech. in Mechanical Engineering from IIT Mandi. Before academia, he was a founding engineer at multiple FinTech and EdTech startups and contributed to digital governance initiatives for the Government of India. His research spans visual analytics, human-computer interaction, and AI, with a focus on effective human-AI collaboration. He has worked with organizations such as Adobe Research, Microsoft Research, Ford Motor Company, and Alibaba, leading to patents, publications, product integrations, and open-source contributions.

The session addressed the growing scale and complexity of datasets and the resulting challenges in visual data analysis. Dr. Narechania highlighted that analysts must make numerous critical choices—

attribute selection, filter application, and visualization modes—all of which strongly affect the reliability of insights.

He noted that while AI tools can aid such decision-making, many lack the adaptability and transparency essential for a human-centric approach, often leading to skewed interpretations and overlooked insights. To address this, he introduced guidance-enriched visual analytics tools, which create a collaborative dynamic where humans and AI provide active feedback to each other throughout analysis.

Through live demonstrations, he showed how such tools help analysts recognize biases, support mapmakers in producing precise cartographic outputs, and enable natural language-driven visualization building. These examples illustrated that human-centric AI not only strengthens human decision-making but also enhances the adaptability of AI systems themselves. The talk concluded with the message that the future of data analysis will be shaped by symbiotic human-AI collaboration—essential for achieving accuracy, transparency, and meaningful insights.

Lights, Computer, Action: Orientation Session 2025

The Orientation Session for incoming B.Tech students of the Department of Computer Science and Engineering, IIT (ISM) Dhanbad, was held on 7th August 2025 under the guidance of the CSE Society. The event warmly welcomed first-year students into the department and introduced them to its diverse co-curricular and technical divisions.

The session opened with an overview of the department, its rich history since 1997, and its achievements. Faculty members were introduced along with their research areas, including artificial intelligence, machine learning, networks, cryptography, software engineering, soft computing, and theoretical computer science. The CSE Society, the department's student-led body, then presented its vision and activities.

Students were introduced to its various divisions: CodeISM, which focuses on competitive programming and global contests like ICPC; CSAI, dedicated to AI research, hackathons, and competitions; WebCSE, centered on web development and innovation; BufferedReader, the creative wing behind magazines and newsletters; and SpeakUp, which builds communication and soft skills through discussions and group activities.

The audience was also briefed about flagship events organized by the society, including hackathons such as Agglomeration and Obscurathon, coding contests like Codessey and Codesshe, technical workshops, the farewell ceremony Yaadein, and the annual departmental fest Udbhav. Students were encouraged to actively participate in these initiatives to enrich their academic journey.

The orientation concluded with an invitation to the new batch to explore, innovate, and contribute to the department's legacy, with the assurance of a journey marked by learning, collaboration, and growth under the CSE Society.



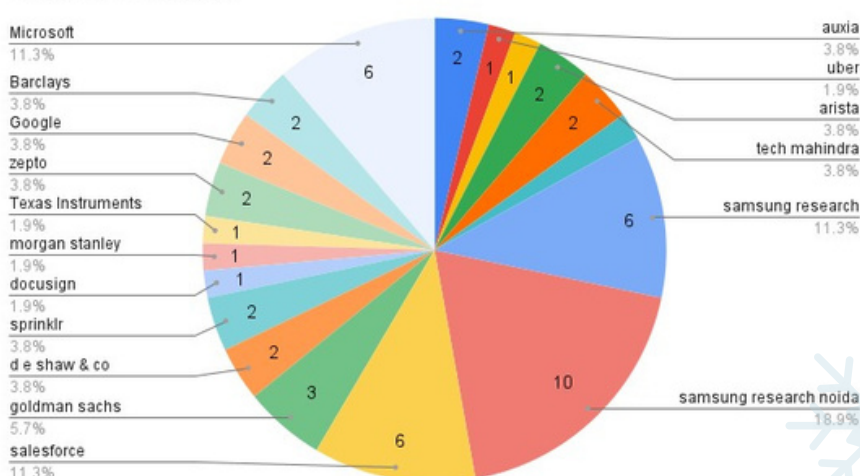
PPO Result of Batch 2026

The Department of Computer Science and Engineering at IIT (ISM) Dhanbad celebrates a stellar PPO season, with students securing offers from leading global tech firms. Pre-placement offers were received from Samsung Research Bangalore & Noida, Uber, Arista, Tech Mahindra, Salesforce, Goldman Sachs, D. E. Shaw, Sprinklr, Google, Microsoft, Amazon, and Barclays, reaffirming the department's strong presence in core software roles.

Startups like Auxia and Zepto also offered exciting opportunities, highlighting the diversity of career paths available to students.

These achievements reflect the department's academic rigor, industry relevance, and exceptional intern performance, marking a proud milestone in their journey toward impactful careers in technology and innovation.

Count of COMPANY



Unveiling the Core Divisions of the CSE Society

The CSE Society began the year with an orientation on 7th August 2025, warmly welcoming the new batch of first-year Computer Science & Engineering students. All key divisions—WebCSE, CSAI, BufferedReader (BR), and SpeakUP were introduced, giving freshers a clear view of their missions, activities, and opportunities.

Following this, each division held its own induction program, allowing students to engage more closely with teams of their interest.

The WebCSE Division, dedicated to collaborative and innovative web development, hosted its induction on 12th August 2025, presenting its vision, ongoing projects, and recruitment process.

On 13th August, the CSAI Division shared its mission of democratizing Artificial Intelligence and Machine Learning, built on four pillars:

Teaching, Projects, Research, and Compete. Students learned about its curriculum, real-world projects, and AI applications across fields like medicine, blockchain, and finance.

The SpeakUP Division conducted its induction on 14th August 2025, emphasizing communication skills, confidence building, presentations, and interview preparation—equipping students for leadership roles.

On the same day, the BufferedReader (BR) Division introduced its Content Team, focused on writing and editing, and its Design Team, handling layouts and visual storytelling. BR highlighted how it fosters creativity, teamwork, and communication while showcasing the department's cultural and intellectual vibrancy.

Together, these programs gave freshers a comprehensive introduction to the society's divisions, inspiring them to contribute, collaborate, and grow within the CSE Society's dynamic ecosystem.



Formation of Special Interest Groups

The Department of Computer Science and Engineering, IIT (ISM) Dhanbad, is launching an exciting new initiative — Special Interest Groups (SIGs) — to cultivate a strong research culture, promote collaborative learning, and create more avenues for academic interaction beyond classrooms. These SIGs, envisioned as student-led collectives, will bring together enthusiastic learners and researchers to explore specialized areas of computer science in greater depth.

Four SIGs have been proposed, focusing on Theoretical Computer Science, Artificial Intelligence & Machine Learning (AI/ML), Computing Systems, and Information Security. Each group will provide a platform for exploring topics such as algorithms, quantum computing, deep learning, cloud systems, IoT, cryptography, and blockchain security.

Activities will include paper presentations, reading sessions, and tutorials on essential research tools like LaTeX, Git, ML frameworks, and Docker. Students will also get the chance to present their own accepted research papers within the department, building confidence for conferences and showcasing its contributions to the global research community. To enrich the experience, talks by faculty, alumni, and external experts will occasionally be organized.

What makes the SIGs impactful is that they are entirely student-driven, giving participants ownership, leadership opportunities, and early exposure to advanced research. They will also provide a platform for postgraduate and doctoral scholars to refine their communication skills in a supportive environment. By bringing together UG, PG, and faculty members in regular discussions, the SIGs aim to strengthen bonds within the CSE community, encourage interdisciplinary collaboration, and keep everyone updated with the latest trends, conferences, and challenges in the field. Ultimately, the SIGs aspire to create a vibrant, intellectually stimulating ecosystem where ideas flow freely, learning goes beyond the classroom, and innovation is nurtured at every level.

A New Chapter for CSE Society Divisions

As the CSE Society steps into a new academic year, a progressive shift has taken place — the change in Faculties-in-Charge (FICs) and Co-FICs across its divisions. This transition honors the contributions of outgoing faculty while embracing the vision of those stepping in. It's more than a reshuffle; it's a recalibration of guidance, collaboration, and continuity. Prof. Jaishree Mayank and Prof. Rahul Gangopadhyay are the newly appointed FIC and Co-FIC WebCSE, respectively. Prof. Anjan Chowdhury has been newly appointed as the Faculty-in-Charge of CSAI. Prof. Mauajama Firdaus and Prof. Jaishree Mayank have stepped in as the FIC and Co-FIC of SpeakUP, while Prof. Nikhil Tripathi is the newly appointed FIC of ByteStream. The FIC of BufferedReader (Prof. Soumen Bag), Co-FIC (Prof. Pranav Bisht) and CodeISM (Prof. Ayan Das and Prof. Tanushree Kaibartta) continue to serve in their respective roles. With new faculty leads stepping into key roles and others continuing their mentorship, the CSE Society enters a refreshed chapter of collaboration, continuity, and creative direction.

Convocation Talk

Shubham Varshney - M.Tech CSE Gold Medalist

Honestly, when I found out I was the gold medalist, it felt amazing. My academic journey had its mix of ups and downs, but things worked out well in the end. A big turning point was when Saurabh Srivastava sir guided me through a crucial phase. What kept me going was the goal of getting into a good company—my CGPA helped a lot with placements. I've been good at academics since the beginning, so that gave me confidence. My advice to juniors: don't take unnecessary stress. Choose subjects you enjoy, and study properly in the last two weeks. Time management was my biggest strength. I was also a LeetCode Guardian, and solving over 1900 problems helped me stay sharp. One thing students should avoid is overthinking—it drains energy. During tough times, I used to relax by playing badminton, spending time in friends' rooms, or playing Mini Militia. These small breaks really helped.



Priyanshu Sharma – President's Gold Medalist & B.Tech CSE Topper

When I first heard from the department that I had secured the gold medal, it felt incredible—but the President's Gold Medal truly came as a surprise. Along with that, I was honored to receive the Smt. Nirja Sahay Memorial Gold Medal, the IIT (ISM) AA Best UG Student Award, and a couple of cash prizes that made the recognition even more special. Receiving the medal from the President of India herself was an unforgettable moment.

I'm especially grateful to my family—their constant support and belief in me made all the difference.

What kept me going throughout these years was my group—we'd prepare seriously for 2–3 weeks before exams, tackle the toughest topics

first, and still find time to chill, so the focus never felt forced. Whenever I felt stressed, I'd watch a movie to reset my mind. To my juniors, I'd say this: enjoy college, but use your time wisely. These four years are full of learning, fun, and personal growth. Build meaningful connections—with friends, mentors, and professors—they'll support you in ways you can't imagine. But also remember: freedom comes with responsibility. Be mindful of your choices, maintain a balance, and things will fall into place. Recognition and appreciation will naturally follow.



Krishnansu Mohapatra – B.Tech CSE Silver Medalist

When the medal list came out, it was a proud moment. Receiving the Silver Medal in B.Tech CSE, along with the prestigious SBI cash prize for academic excellence, felt like a strong acknowledgment of the consistency and focus I maintained throughout. My family was proud, and it meant a lot to all of us.

I've always believed in learning for the sake of learning. I didn't study all day, but whenever I did, I was fully focused. I preferred attending classes, taking proper notes, and staying consistent.

To juniors—balance is key. Don't overdo anything. Prepare well, stay connected with seniors, and maintain a solid CGPA—it plays a big role in

placements. CSE brings pressure. Everyone's working silently, so it's natural to feel the heat. I coped through games, music, and spending time with friends. This medal is not just an award—it's a trademark of the effort and discipline I put in.



PhDs Thesis submitted in the month of August 2025

Awardee	Supervisor	Thesis Title
Gaurav Mohindru	Prof. Haider Banka	DIFFERENT DATA ANALYSIS TECHNIQUES FOR IOT DATA

Recently accepted Research Work for Publication

Title: Robust optimization for optimal electrical asset placement in small and medium-sized industries.

Authors: Prof. Pranay Kumar Saha, Anupam Trivedi, Dipti Srinivasan

Accepted at: Sustainable Energy, Grids and Networks, Volume 43, 2025,101736, Elsevier.

Title: Adaptive NDN caching: Leveraging dynamic behaviour for enhanced efficiency.

Authors: Kumari, Matta Krishna, and Prof. Nikhil Tripathi.

Accepted at: Journal of Network and Computer Applications, Volume 243, 2025, 104288, Elsevier.

Title: A Modular Framework for Gradual LDCT Denoising Using Noisy Data Only

Authors: Kousik Sarkar, Prof. Soumen Bag

Accepted at: 7th IEEE International Conference on Artificial Intelligence in Engineering and Technology (IEEE IICAET), IEEE, Kota Kinabalu, Malaysia, Aug 26-28, 2025.

Contact Us:

Prof Chiranjeev Kumar
Head of the Department
Email: cse@iitism.ac.in
Phone: +91-326-2235273 (O)

Credits:

Prof Nikhil Tripathi (Faculty Coordinator)
Mirthipati Krishna Balaji (22JE0573)
Bitra Sri Pragna (22JE0259)
Ishika Acharya (24JE0623)

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