Department of Computer Science and Engineering

TECH SPACE

Volume-20

June 2025

Meerut Institute of Engineering and Technology

N.H. 58, Delhi-Roorkee Highway, Baghpat Bypass Road Crossing, Meerut, Uttar Pradesh 250005

DEPARTMENT OF CSE

TECH SPACE
JUNE 2025
VOLUME 20

EDITORIAL BOARD

Dr. Vikas Srivastava
Professor

Mr. Ankush Gupta
Assistant Professor

Mr. Prateek Malik
Student (4th Sem)

DEPARTMENT OF CSE

MESSAGE FROM CHAIRMAN

Shri Vishnu Sharan

Shri Vishnu Saran, B.E. (Mechanical), Chairman of MIET, has obtained his B.E. (Hons.) degree from NIT Kurukshetra and then served the state of Uttar Pradesh for over 37 years as Director of Boilers. He is a man with an extraordinary perception of a better tomorrow for each student who enters the premises of MIET through the provision of the best possible resources one could ask for. He is a visionary who is carrying on the dream philanthropic project nurtured by his father, the Founder-Chairman of MIET Group, the Late Sri CS Agarwal. He strongly believes and follows the four golden principles for success laid by the honorable Late Smt. Indira Gandhi ji - Foresight, Hard Work, Determination and Discipline.

The strength of MIET indeed lies in his grit & determination, the forceful support by his excellent subordinates, and the overall study orientation through multi-development policies that have distinctly made MIET a name brightening up in progression each year.

DEPARTMENT OF CSE

MESSAGE FROM VICE-CHAIRMAN

Shri. Punit Agarwal

Shri Puneet Agarwal, vice-chairman of the MIET Group of institutions, is a Civil Engineering graduate from one of the prestigious Institutes of Technology, BHU, now known as IIT, BHU. He has done his PGDM from the Indian Institute of Management, Ahmedabad. He holds a rich experience of 24 years with multinational, Indian corporates, PSU, and consultancy firms and also in diverse industries including Power and Power Equipment, Textiles, Retail, Education, and IT. The areas of his strong exposure consist of Sales & Marketing, Engineering Design, Operations, and Corporate Finance. He has shown unalloyed dedication to invigorating the educational progress of students.

DEPARTMENT OF CSE

MESSAGE FROM DIRECTOR

Prof. (Dr.) Sanjay Kumar Singh

At MIET, we emphasize Concept-Based Learning and Comprehensive Industrial Exposure to ensure holistic student development and global competency. We continuously innovate in teaching and upgrade our infrastructure to meet industry demands. Our state-of-the-art labs, Centres of Excellence, and R&D labs provide hands-on training and opportunities to work on live industry projects. With strong industry tie-ups and MoUs, we bridge the gap between academia and industry, grooming students for success in both core and IT sectors.

We offer 360-degree nurturing for overall grooming and developing global competency. We are committed to excellence through innovations in the teaching and learning process and have been successful in maintaining high academic standards by taking appropriate steps to bridge the gap between industry and academia.

DEPARTMENT OF CSE

MESSAGE FROM HOD

Dr. Vikas Srivastava

It gives me immense pleasure to pen down my greetings for all the students and parents on behalf of Department of Computer Science and Engineering, M.I.E.T, Meerut. The Department of Computer Science & Engineering was established in M.I.E.T in 1997. Since then the department equips its students with undergraduate (B.Tech) and post-graduate (M.Tech) level expertise and appropriate skills in the field of Computer Science and Engineering.

The department considers the committed and dedicated staff as its core strength in providing value education with professional standards. Our faculties with experiences in both teaching and industry constantly aspire to achieve academic excellence with emphasis on ingraining inventive thinking and leadership skills in our students. Varieties of workshops are held over entire session to enable knowledge impartment and improving programming skills in C, Python, Android, Oracle JAVA, .Net, Cloud Computing, Big Data and Internet of Things. It is a known fact that Computer Software and Service Industry are dynamic and ever-changing.

DEPARTMENT OF CSE

ABOUT DEPARTMENT

Department of Computer Science & Engineering (CSE) was established in MIET with the aim of giving quality education. It is an academic center for education, research and creativity in key areas of Computer Science. Department is equipped with labs, Seminar hall with well qualified and learned faculties having specialization in different computer domain.

Department empowers students to have excellence in scientific education, technical education and research to serve as a valuable resource for industry and society. Department promotes collaboration with industry like IBM, Wipro and TCS etc. to achieve better integration of theory. Department offers industrial visits and Personality development courses to fulfill the gap between industry and academics. Department is empowering students by providing latest technologies used in Industry like SAP, REDHAT, ADOBE, SALESFORCE, embedding programming to bridge the gap between Industry and academia.

DEPARTMENT OF CSE

CORE FACULTY

Dr. Vikas Srivastava (Professor)
HOD

Dr. Pradeep Pant (Professor)
Python and C SPOC

Dr. Satish MS Babu (Professor)
DQAC Head

Dr. Anurag Aeron(Professor)
SATLAB Coordinator

Dr. Satendra Kumar(Associate Professor)
Project, MLSA Coordinator,

Dr. Ajai Kumar(Associate Professor)
Academic Leader

Dr. Altamas Sheikh(Associate Professor)
IQAC, Exam Cell Member

Mr. Vijay Kumar (Assistant Professor)
AIML, Data Science, GENAI SPOC

Mr. Jagbeer Singh(Assistant Professor)
AWS SPOC, CSI Coordinator

DEPARTMENT OF CSE

CORE FACULTY

Ms. Pragya Gaur (Assistant Professor)
Program Leader 2nd Year

Ms. Prerna Chaudhary (Assistant Professor)
Program Leader 3rd Year

Ms. Srishti Vashishta (Assistant Professor)
Program Leader 4th Year

Mr. MD Shahid (Assistant Professor)
M.Tech Coordinator

Mr. Vivek Kumar(Assistant Professor)
Time Table Coordinator

Ms. Priyanka (Assistant Professor)
ECHOES Club Coordinator

Mr. Amit Saini(Assistant Professor)
T & P Coordinator

Mr. Ankush Gupta(Assistant Professor)
Admission Leader , Magazine Editor

Mr. Priya Kumari(Assistant Professor)
CSWD Club Coordinator

DEPARTMENT OF CSE

DEPARTMENT ACTIVITIES

HCL INDUSTRY VISIT

MIET CSE Department Organizes Successful Industrial Visit to HCL Tech Campus…

In a bid to provide students with valuable industry exposure, the CSE Department of MIET recently conducted an industrial visit to HCL TechCampus on March 5, 2025. The visit, which saw the participation of over 50 students from the department, aimed to bridge the gap between theoretical knowledge and practical application in the field of computer science and engineering.

During the visit, the HCL Family conducted an interactive session, led by Mr. Kaushal Dev Kashyap, which focused on market trends, the increasing demand for skilled engineers, and advancements in Artificial Intelligence and Machine Learning. The session emphasized the importance of hands-on learning, particularly through capstone projects, to equip students with the necessary skills to thrive in the tech sector. The students also gained valuable insights into IT industry operations, service-based company trends, and career opportunities in the tech sector.

SOME GLIMPSES OF VISIT

DEPARTMENT OF CSE

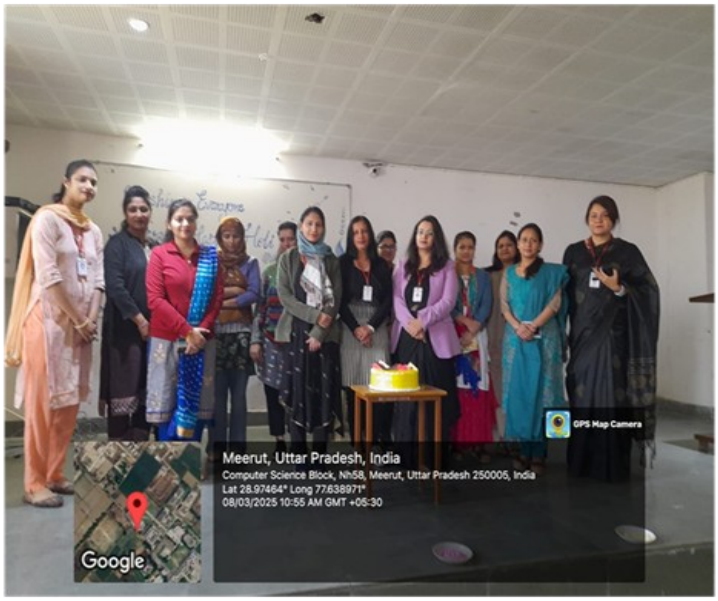
DEPARTMENT ACTIVITIES
WOMEN'S DAY AND HOLI CELEBRATION 2025

Women's Day & Holi Celebration at CSE DEPARTMENT….

We had a fantastic celebration combining the vibrancy of Holi and the spirit of Women's Day at our institution! The event was graced by our esteemed Director Sir, Dean Academic, Dean CSIT, and HODs of all departments, who shared their inspiring words with the faculty.

The celebrations were filled with joy, colors, and enthusiasm as our faculty members participated in fun games and engaging activities, making the day even more memorable. It was a wonderful occasion to celebrate women's achievements and embrace the festive colors of Holi together as one family.

SOME GLIMPSES OF CELEBRATION



DEPARTMENT OF CSE

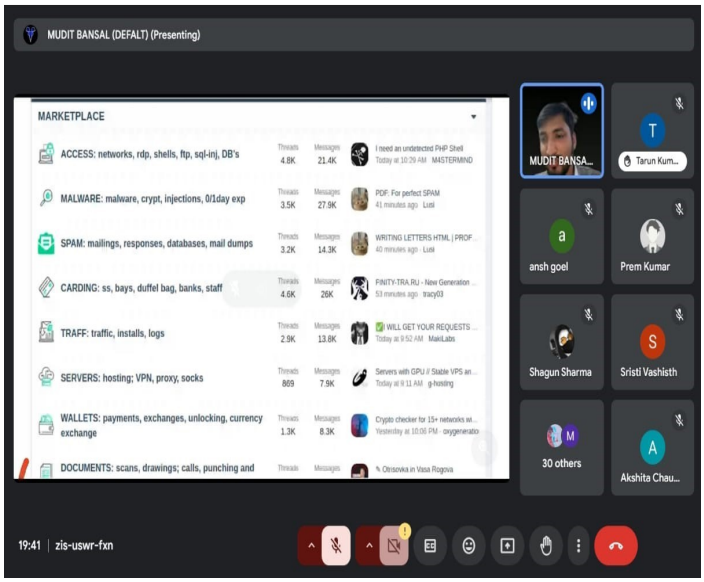
DEPARTMENT ACTIVITIES

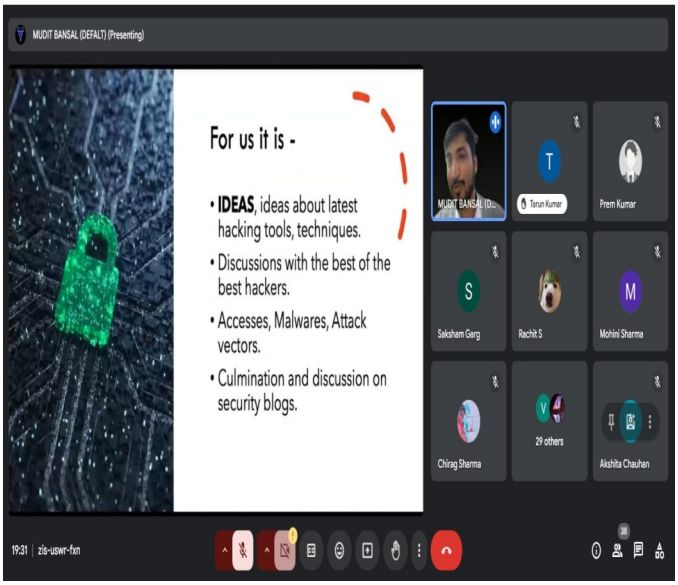
DECRYPTING THE DARK BY ECHOES CLUB

ECHOES MIET proudly presents an engaging session titled **"Decrypting The Dark"**, designed to introduce participants to the intriguing world of the dark web. This event will delve into how individuals can safely explore the dark web out of curiosity and also uncover the professional opportunities it offers. Whether you're a student, a tech enthusiast, or someone interested in cybersecurity, this session will provide valuable insights into navigating this hidden part of the internet responsibly.

Scheduled for February 28, 2025, from 7:00 pm to 8:00 pm in online mode, the talk will be led by Mr. Mudit Bansal, a Cyber Threat Researcher at CloudSEK. With his extensive knowledge and experience in cyber threats, Mr. Bansal will share practical tips on how to access the dark web safely and discuss how a career in this domain can be both exciting and rewarding. The session aims to demystify common misconceptions and highlight the legitimate uses and risks associated with the dark web.

SOME GLIMPSES OF EVENT





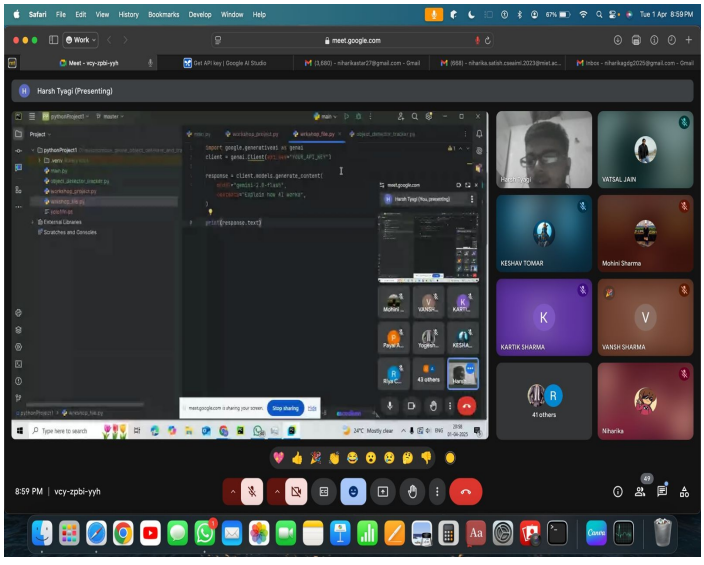
DEPARTMENT OF CSE

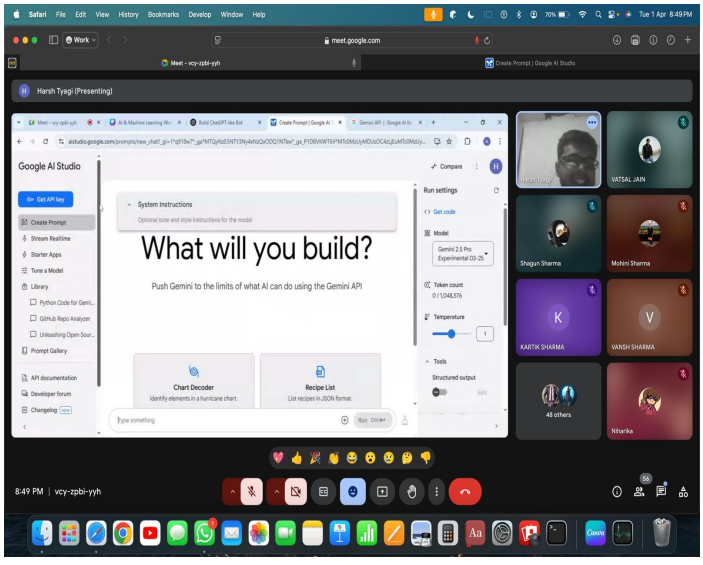
DEPARTMENT ACTIVITIES
FROM CODE TO CREATION BY ECHOES CLUB

The **Echoes MIET** club recently hosted a compelling online workshop titled **"From Code to Creation: Hands-On Projects with Harsh Tyagi"**. Scheduled for **April 1, 2025**, from **8:00 to 10:00 pm**, the session offered participants a unique opportunity to dive into the world of AI and ML fundamentals using Python. Led by **Harsh Tyagi**, an AI Engineer at **Innovacore Technologies & Solutions**, the workshop emphasized practical learning through hands-on projects and real-world applications of code-to-creation techniques.

Delivered as an entirely **online experience**, this workshop provided attendees with an accessible yet immersive way to develop essential programming and artificial intelligence skills. Whether you were building your first model or enhancing existing knowledge, the two-hour session was designed to inspire creativity, demonstrate tangible project workflows, and encourage active experimentation—bridging the gap between theoretical concepts and their practical implementation.

SOME GLIMPSES OF EVENT





DEPARTMENT OF CSE

DEPARTMENT ACTIVITIES

HACKATHON HAVOC 2.0 BY ECHOES & CSWD CLUB

The **Echoes MIET** club, in collaboration with **CSWD** and the **Meerut Foundation**, proudly presents **Hackathon Havoc 2.0**, an exclusive hackathon crafted specifically for **first-year students**. Scheduled from **9:00 AM on April 11** to **1:00 PM on April 12, 2025**, this immersive tech event invites newcomers to code, collaborate, and create in a thrilling 28-hour innovation marathon. The tagline "Code – Collaborate – Create" perfectly captures the spirit of this event, which promises not only an enriching experience but also enticing rewards—including a **₹5000** cash prize and a trophy for the winner, runner-up prizes of **₹2500** and **₹1500**, as well as **participation certificates** for all attendees. In addition, the event provides college-sponsored refreshments and stays to ensure participants can fully engage without distractions.

This opportunity is **completely free to register**, making it accessible to all incoming students eager to dip their toes into the world of coding. This events was only for first year students.

SOME GLIMPSES OF EVENT

DEPARTMENT OF CSE

DEPARTMENT ACTIVITIES
DEVGATHERING BY MLSA CLUB

DevGathering 2K25, the flagship 32-hour hackathon organized under the Microsoft Learn Student Ambassador (MLSA) Chapter of MIET Meerut, was a roaring success. Hosted on May 16–17, 2025, at the Schroff Block, Meerut Institute of Engineering and Technology, Meerut. The event brought together innovation, mentorship, and the power of collaborative coding with over 200+ participants from across the North Region formed 55 shortlisted teams to take on real-world challenges through code, design, and sheer creativity.

Participants will get to tackle real-world challenges, ranging from AI-driven solutions and cloud computing to IoT innovations and sustainable technology projects. With mentorship from industry professionals, hands-on workshops, and opportunities to network with fellow tech enthusiasts, DevGathering 2K25 offers a dynamic arena to learn, experiment, and elevate your hackathon game in a vibrant, collaborative environment.

Congratulations to MIET OneCode team for holding 2nd rank among all teams and received trophies, certificates, tech goodies, and the spotlight they earned through their outstanding innovation and teamwork.

SOME GLIMPSES OF EVENT

DEPARTMENT OF CSE

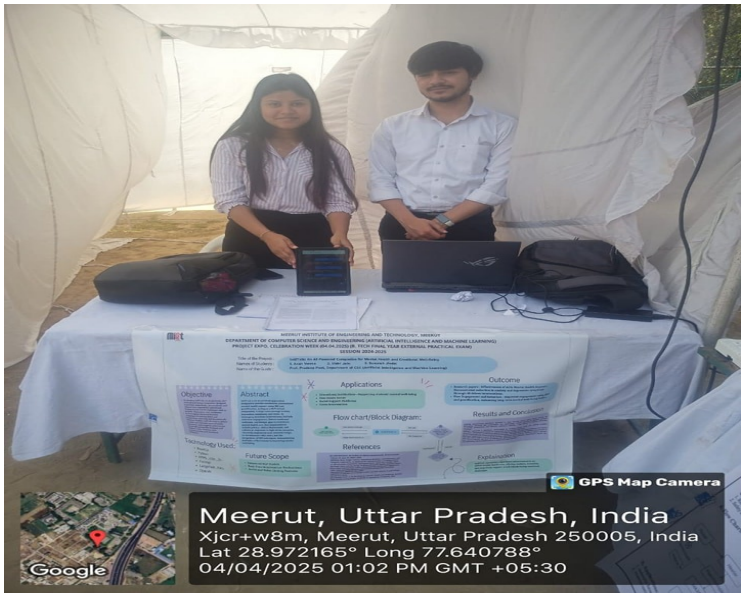
DEPARTMENT ACTIVITIES

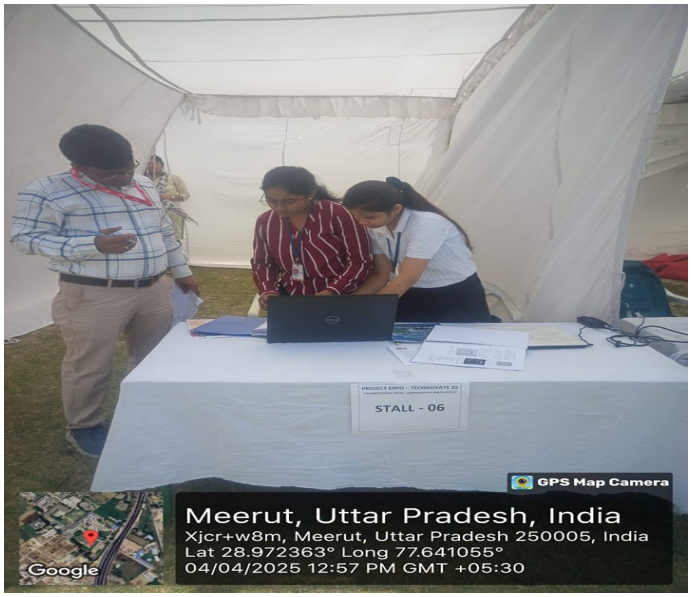
PROJECT EXPO

The MIET Project Expo is an annual event that showcases the innovative projects and research work of students from various engineering and technology disciplines. It provides a dynamic platform for students to present their ideas, demonstrate their technical skills, and engage with industry experts, faculty members, and peers. The expo encourages creativity and practical application of theoretical knowledge, fostering a culture of innovation and collaboration within the campus. Participants get the opportunity to receive valuable feedback, enhance their problem-solving abilities, and gain exposure to the latest trends and technologies in their respective fields.

In addition to promoting student talent, the MIET Project Expo serves as a bridge between academia and industry. It attracts professionals and recruiters who are eager to explore fresh ideas and potential solutions to real-world problems. The event also helps students develop soft skills such as communication, teamwork, and project management, which are essential for their future careers.

SOME GLIMPSES OF EVENT





DEPARTMENT OF CSE

DEPARTMENT ACTIVITIES
NATIONAL CONFERENCE BY CSI

The National Conference hosted by MIET (Meerut Institute of Technology) on March 7th and 8th, 2025, is an exceptional platform aimed at fostering innovation and research in the fields of Agrotech, Food Processing, Computational Intelligence, Electronics, and Communication. This conference brings together experts, researchers, and students from across the country to share their latest findings and advancements. The event promises to provide insightful sessions and discussions on cutting-edge technologies that are transforming agriculture and communication sectors, encouraging interdisciplinary collaboration and knowledge exchange.

Participants of this national-level conference will also receive certificates recognizing their contribution and participation, which adds significant value to their academic and professional profiles. The event is supported by several prestigious organizations and institutions, emphasizing its credibility and importance in the academic community. By leveraging this platform, attendees can explore emerging trends, gain practical insights, and connect with industry leaders and academic peers, driving forward innovation in their respective fields.

DEPARTMENT OF CSE

DEPARTMENT ACTIVITIES
AWS LAB INAUGURATION

MIET proudly inaugurated its **#AWS Cloud Computing Lab**, a visionary step towards promoting **technology-driven education** and preparing students for the digital future.

The event commenced with a ceremonial ribbon-cutting led by distinguished dignitaries–Mr. Lokesh Mehra, AWS Senior Manager (South Asia), and Mr. Abhirup Ghosh, AWS Business Leader Senior Manager. Their esteemed presence lent immense prestige and inspiration to the occasion.

Adding to the significance of the event, Hon'ble Vice Chairman of MIET, Mr. Puneet Agarwal, and Campus Director, (Dr.) Sanjay Singh, addressed the audience, emphasizing the importance of such industry-academia partnerships in shaping future-ready professionals.

Key institutional leaders from MIET, including Director of Placements Mrs. Akansha Agarwal, Director of Academics Dr. Ranjeet Verma, and Dean Associate Dr. Shailendra Narayan, graced the event alongside HOD of #CSE Dr. Vikash Srivastava, HODs from allied branches, and dedicated faculty coordinators such as Jagbeer Singh (CPOC – AWS Academy).

SOME GLIMPSES OF EVENT

DEPARTMENT OF CSE

DEPARTMENT ACTIVITIES

BHARAT SHIKSHA EXPO—CODETHON

On 04 April 2025, MLSA MIET Meerut hosted the Codethon Pre-Qualifier Round, a foundational step toward the Bharat Shiksha Expo 2025, scheduled from 24–26 April in Greater Noida. Targeted at school students from Classes 9 to 12, the event aimed to discover and encourage budding coders. With 300+ registrations, the overwhelming turnout reflected the growing passion for programming among school communities.

The **BHARAT SHIKSHA EXPO – CODETHON**, organized by India Exposition Mart, Greater Noida in collaboration with the Incubation Forum at MIET Meerut, is a national-level educational technology event aimed at fostering innovation and technical skills among school students. Scheduled to take place from **24th to 26th April 2025** at the India Exposition Mart, this exciting platform will bring together young coders from across the country to participate in a high-energy coding competition that tests their logical thinking, programming skills, and problem-solving abilities.

Among the key attractions of the three-day Bharat Shiksha Expo, the Codethon engaged Class 9–12 students in coding, MCQs, and debugging challenges. Organized by the Incubation Forum, MIET Meerut in collaboration with India Exposition Mart, it drew budding tech minds from across Delhi NCR and across.

SOME GLIMPSES OF EVENT

DEPARTMENT OF CSE

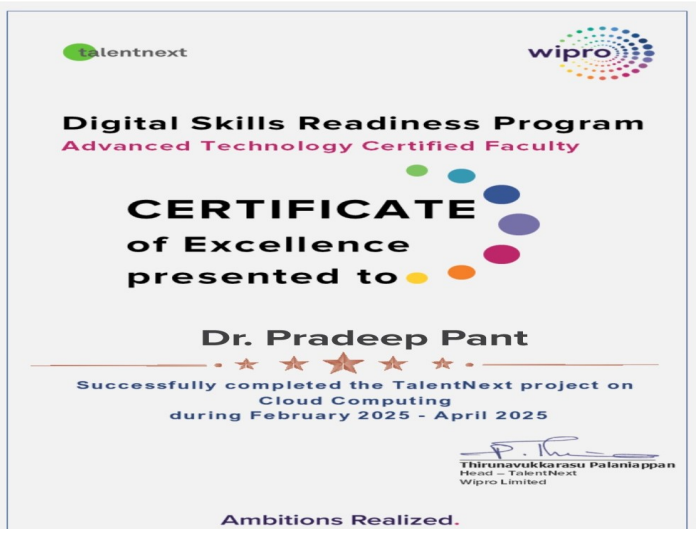
MIET CONVOCATION 2K25

The MIET Meerut Convocation 2025 was a momentous occasion that celebrated the academic achievements of 1,156 graduates from Dr. A.P.J. Abdul Kalam Technical University (AKTU), Lucknow. Held on May 17, the ceremony commenced with the lighting of the ceremonial lamp by distinguished dignitaries, including AKTU Vice Chancellor Prof. (Dr.) J.P. Pandey and MIET Chairman Vishnu Sharan. The event featured a vibrant bagpipe performance by students of Khalsa Inter College, setting an energetic tone for the proceedings. A notable highlight was the presentation of a 3D model of the Ram Temple, crafted by students in the AICTE Idea Lab, symbolizing the institution's commitment to innovation and cultural heritage.

During the ceremony, degrees were conferred upon graduates from various programs, including B.Tech, MBA, MCA, M.Tech, B.Pharm, and M.Pharm. Top performers in each discipline were honored with Gold, Silver, and Bronze medals, recognizing their academic excellence. Among the awardees, Jhalak Jain, a B.Tech (Computer Science - Data Science) student, received the Chancellor's Award and Gold Medal for securing the highest marks in the university. Additionally, Shiva Chaudhary, an M.Tech (Computer Science) student, was awarded the Silver Medal for securing third position at the university level.

DEPARTMENT OF CSE

FACULTY DEVELOPMENT PROGRAM



Congratulation to Dr. Pradeep Pant, Professor, Department of Computer Science & Engineering. he completed training program on "Cloud Computing" conducted by Wipro from Feb 2025 -April 2025

Congratulation to Mr. Ankush Gupta, Assistant Professor, Department of Computer Science & Engineering. He completed 6 days training program on "AI Enabled Collaborative Learning in 6G and Beyond " from 20/01/25 - 25/01/25.

Congratulation to Mr. Ankush Gupta, Assistant Professor, Department of Computer Science & Engineering. He completed training program on "Artificial Intelligence" conducted by Infosys Springboard on 17 Feb 2025 to 21 Feb 2025

DEPARTMENT OF CSE

FACULTY DEVELOPMENT PROGRAM


Infosys
Navigate your next

CERTIFICATE OF ACHIEVEMENT

The certificate is awarded to

Priyanka .

for successfully completing

Artificial Intelligence Primer Certification

on March 4, 2025

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Tuesday, March 4, 2025
To verify, scan the QR code at https://verify.onwingspan.com

Congratulation to Ms. Priyanka, Assistant Professor, Department of Computer Science & Engineering. She completed training program on "Artificial Intelligence" conducted by Infosys Springboard on 17 Feb 2025 to 21 Feb 2025


Infosys
Navigate your next

COURSE COMPLETION CERTIFICATE

The certificate is awarded to

Dr. Vikas Srivastava

for successfully completing the course

Introduction to Artificial Intelligence

on February 17, 2025

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Tuesday, February 18, 2025
To verify, scan the QR code at https://verify.onwingspan.com

Congratulation to Dr. Vikas Srivastava, Professor, Department of Computer Science & Engineering. He completed training program on "Artificial Intelligence" conducted by Infosys Springboard on 17 Feb 2025 to 21 Feb 2025


Infosys
Navigate your next

COURSE COMPLETION CERTIFICATE

The certificate is awarded to

Pradeep Pant

for successfully completing the course

Introduction to Deep Learning

on February 19, 2025

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Wednesday, February 19, 2025
To verify, scan the QR code at https://verify.onwingspan.com

Congratulation to Dr. Pradeep Pant, Professor, Department of Computer Science & Engineering. He completed course on "Introduction to Deep Learning" conducted by Infosys Springboard on 19 February 2025.

DEPARTMENT OF CSE

FACULTY DEVELOPMENT PROGRAM


Infosys
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COURSE COMPLETION CERTIFICATE

The certificate is awarded to

Pradeep Pant

for successfully completing the course

Introduction to Data Science

on February 20, 2025

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Thursday, February 20, 2025
To verify, scan the QR code at https://verify.onwingspan.com

Congratulation to Dr. Pradeep Pant, Professor, Department of Computer Science & Engineering. He completed course on "Introduction to Data Science" conducted by Infosys Springboard on 20 February 2025

Congratulation to Mr. Ankush Gupta, Assistant Professor, Department of Computer Science & Engineering. He completed course on "Introduction to Deep Learning" conducted by Infosys Springboard on 18 February 2025


Infosys
Navigate your next

COURSE COMPLETION CERTIFICATE

The certificate is awarded to

ANKUSH GUPTA

for successfully completing the course

Introduction to Deep Learning

on February 18, 2025

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Tuesday, February 18, 2025
To verify, scan the QR code at https://verify.onwingspan.com


Infosys
Navigate your next

COURSE COMPLETION CERTIFICATE

The certificate is awarded to

ANKUSH GUPTA

for successfully completing the course

Introduction to Data Science

on February 17, 2025

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Tuesday, February 18, 2025
To verify, scan the QR code at https://verify.onwingspan.com

Congratulation to Mr. Ankush Gupta, Assistant Professor, Department of Computer Science & Engineering. He completed course on "Introduction to Data Science" conducted by Infosys Springboard on 17 February 2025

DEPARTMENT OF CSE

FACULTY ACHIEVEMENT

3rd INTERNATIONAL CONFERENCE ON NETWORKS AND CRYPTOLOGY

MAY 29-31, 2025

YOUNG SCIENTIST AWARD

This certificate is awarded to

Dr. AJAI KUMAR

MIET, MEERUT

In recognition of their exceptional scientific potential, commitment to research excellence, and promise as an emerging contributor to the scientific community, the recipient is hereby awarded the "NETCRYPT YOUNG SCIENTIST AWARD" at the 3rd International Conference on Networks and Cryptology (NetCrypt 2025), organized by the School of Computer and Systems Sciences, Jawaharlal Nehru University, New Delhi, India, from May 29 to 31, 2025.

Dr. Karan Singh, Convener, NETCRYPT 2025

Prof. D. K. Lobiyal, General Chair, NETCRYPT 2025

Prof. Zahid Raza, Co-Patron, NETCRYPT 2025

This certificate is awarded to Dr. Ajai Kumar from MIET, Meerut, in recognition of his exceptional scientific potential, dedication to research excellence, and promise as an emerging contributor to the scientific community. It is presented as part of the 3rd International Conference on Networks and Cryptology (NetCrypt 2025), which took place from May 29 to 31, 2025. The award recognizes Dr. Kumar's outstanding achievements and commitment to advancing knowledge in the fields of networks and cryptology.

The conference is organized by the School of Computer and Systems Sciences at Jawaharlal Nehru University, New Delhi, India, and supported by various esteemed organizations, including IEEE. This certificate honors young scientists who demonstrate significant promise and contributions in their respective areas of study. Dr. Kumar's recognition highlights his role as a leading figure among emerging scientists in this specialized domain, reflecting the high standards and rigorous evaluation process of the conference.

The certificate is formally signed by the convener Dr. Karan Singh, the general chair Prof. D.K. Lobiyal, and the co-patron Prof. Zahid Raza, all associated with NetCrypt 2025. The presence of their signatures alongside official logos underscores the credibility and prestige of the award.

DEPARTMENT OF CSE

FACULTY ACHIEVEMENT

क्र. सं./Sl. No अधिसूचना सं. /Notification No. 769/P/2024 नामांकन सं. /Enrollment No. 20/10/PC/009

H00013795

जवाहरलाल नेहरू विश्वविद्यालय
नई दिल्ली
द्वारा
विद्वत् परिषद् की अनुशंसा पर
अजय कुमार
को
कंप्यूटर साइंस एंड टेक्नोलॉजी
में
विद्या वाचस्पति

की उपाधि प्रदान की जाती है, जिन्होंने संबंधित अध्यादेश के अंतर्गत निर्धारित योग्यता को वर्ष 2024 में सफलतापूर्वक उत्तीर्ण किया।
शोध-प्रबंध का शीर्षक: "कंजेशन मैनेजमेंट इन डब्लू एस एन यूजिंग सॉफ्ट कंप्यूटिंग अप्रोच"

विश्वविद्यालय के मुद्रांकन द्वारा नई दिल्ली, भारत गणराज्य में प्रदत्त

Jawaharlal Nehru University
New Delhi

Upon the recommendation of the Academic Council
hereby confers the Degree of
Doctor of Philosophy
in
Computer Science and Technology
on
Ajai Kumar
who has successfully completed in the year 2024 the requirements prescribed under the Ordinance for the award of this Degree.
Title of the Thesis: "Congestion Management in WSN using Soft Computing Approach"

Given this day under the seal of the University at New Delhi in the Republic of India
दिनांक/The 09/01/2025

कुलसचिव/Registrar
कुलपति/Vice-Chancellor

Congratulations to the Dr. Ajai kumar, Associate Professor, Department of CSE, for PhD degree certificate awarded by Jawaharlal Nehru University, New Delhi. The certificate confirms that Ajai Kumar has been conferred the degree of Doctor of Philosophy in Computer Science and Technology. It acknowledges the successful completion of all academic requirements prescribed under the Ordinance for the year 2024. The title of his thesis is "Congestion Management in WSN Using Soft Computing Approach," highlighting his research focus on improving network efficiency through advanced computational techniques.

This prestigious recognition symbolizes Ajai Kumar's dedication, expertise, and significant contribution to the field of computer science. It marks a crucial academic and professional milestone, paving the way for future research opportunities, academic roles, and advancements in technology-driven solutions.

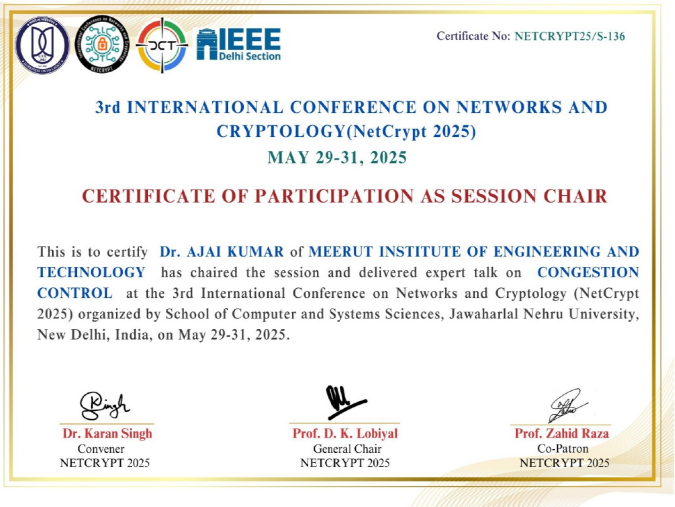
DEPARTMENT OF CSE

FACULTY ACHIEVEMENT

Congratulations to **Dr. Ajai Kumar** from **Meerut Institute of Engineering and Technology** in recognition of his distinguished role as a **Session Chair** at the **3rd International Conference on Networks and Cryptology (NetCrypt 2025)**. This international event took place from **May 29 to May 31, 2025**, and was hosted by the **School of Computer and Systems Sciences** at **Jawaharlal Nehru University**, New Delhi, India. Dr. Kumar's contribution involved both chairing a technical session and delivering an expert talk on **Congestion Control**, a critical topic in the field of computer networks.

The certificate serves as formal acknowledgment of Dr. Kumar's leadership and scholarly input during the conference. Chairing a session at such a reputed international event demonstrates his expertise and standing in the academic community. His talk on Congestion Control likely offered valuable insights into managing network traffic efficiently, addressing latency issues, and improving data transmission reliability—topics of great relevance in modern network architecture and cryptographic systems.

SOME GLIMPSES OF ACHIEVEMENT



IEEE Delhi Section

Certificate No: NETCRYPT25/S-136

3rd INTERNATIONAL CONFERENCE ON NETWORKS AND CRYPTOLOGY(NetCrypt 2025)

MAY 29-31, 2025

CERTIFICATE OF PARTICIPATION AS SESSION CHAIR

This is to certify **Dr. AJAI KUMAR** of **MEERUT INSTITUTE OF ENGINEERING AND TECHNOLOGY** has chaired the session and delivered expert talk on **CONGESTION CONTROL** at the 3rd International Conference on Networks and Cryptology (NetCrypt 2025) organized by School of Computer and Systems Sciences, Jawaharlal Nehru University, New Delhi, India, on May 29-31, 2025.

Dr. Karan Singh
Convener
NETCRYPT 2025

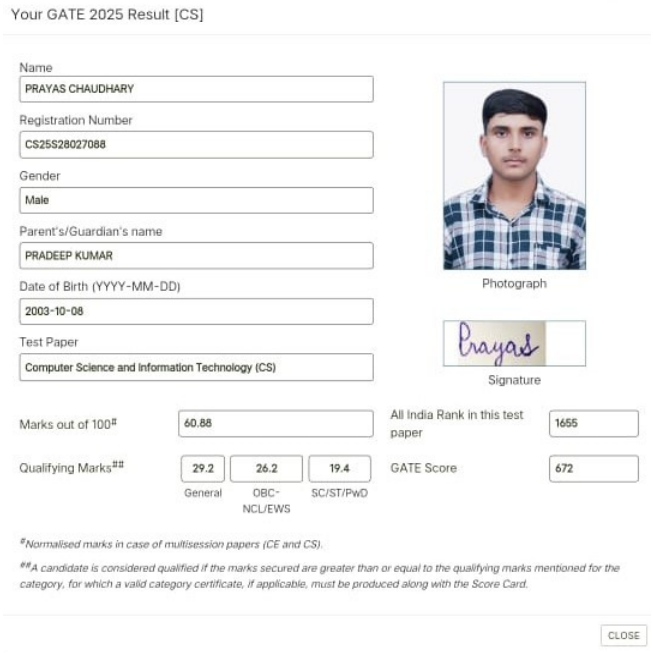
Prof. D. K. Lobiyal
General Chair
NETCRYPT 2025

Prof. Zahid Raza
Co-Patron
NETCRYPT 2025

DEPARTMENT OF CSE

STUDENT ACHIEVEMENTS

Prayas Chaudhary has successfully qualified the GATE 2025 exam in the Computer Science and Information Technology (CS) paper, scoring 60.88 out of 100. With a GATE score of 672, he secured an All India Rank of 1655 among thousands of candidates. His marks exceed the qualifying criteria across various categories, showcasing his strong performance and dedication in this highly competitive examination. This achievement opens doors for further academic and professional opportunities in the field of computer science.



Your GATE 2025 Result [CS]

Name: PRAYAS CHAUDHARY

Registration Number: CS25S28027088

Gender: Male

Parent's/Guardian's name: PRADEEP KUMAR

Date of Birth (YYYY-MM-DD): 2003-10-08

Test Paper: Computer Science and Information Technology (CS)

Photograph

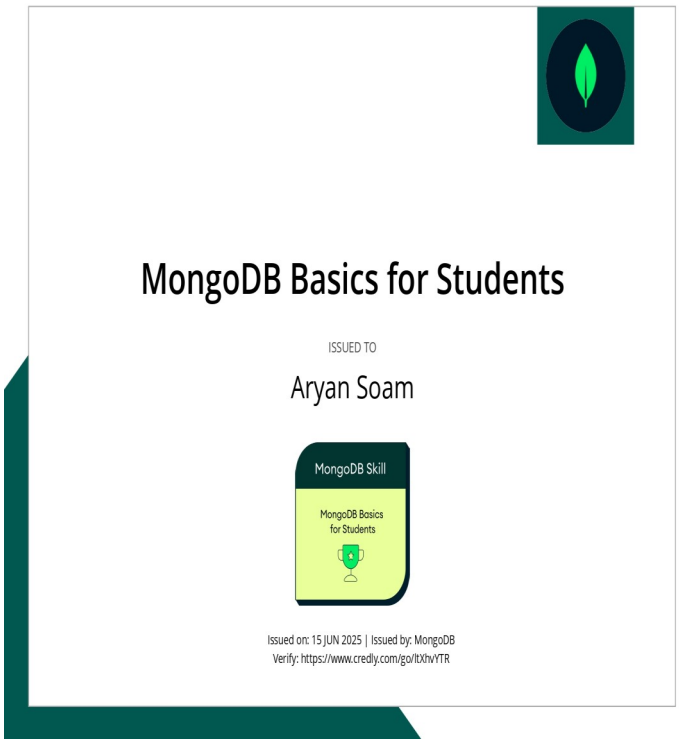
Signature

Marks out of 100#	60.88			All India Rank in this test paper	1655
Qualifying Marks##	29.2 (General)	26.2 (OBC-NCL/EWS)	19.4 (SC/ST/PwD)	GATE Score	672

#Normalised marks in case of multisession papers (CE and CS).

##A candidate is considered qualified if the marks secured are greater than or equal to the qualifying marks mentioned for the category, for which a valid category certificate, if applicable, must be produced along with the Score Card.

CLOSE



Aryan Soam has successfully completed the "MongoDB Basics for Students" course on 15 June, 2025, demonstrating foundational knowledge in MongoDB, a popular NoSQL database. This certification highlights Aryan's skills in understanding and working with MongoDB, which is essential for managing and manipulating data in modern applications.

DEPARTMENT OF CSE

STUDENT ACHIEVEMENTS

Yash Sharma has successfully qualified the GATE 2025 exam in the Computer Science and Information Technology (CS) paper, scoring 38.38 out of 100. With a GATE score of 443, he secured an All India Rank of 10574 among thousands of candidates. His marks exceed the qualifying criteria across various categories, showcasing his strong performance and dedication in this highly competitive examination. This achievement opens doors for further academic and professional opportunities in the field of computer science.

GRADUATE APTITUDE TEST IN ENGINEERING 2025
अभियांत्रिकी स्नातक अभिक्षमता परीक्षा २०२५
Organising Institute: INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
SCORE CARD

Name of the Candidate	YASH SHARMA
Name of the Parent/Guardian	AJAY SHARMA
Registration No.	CS25S28009102
Date of Birth	August 31, 2004
Test Paper	Computer Science and Information Technology (CS)
Date of Examination	February 1, 2025
GATE Score	443
*Marks out of 100	38.38

All India Rank (AIR) in the test paper:	10574	Qualifying Marks	
Number of candidates appeared for the test paper:	170825	General:	29.2
		EWS/OBC-NCL:	26.2
		SC/ST/PwD:	19.4

*Normalised marks across two sessions of the test paper

Prof. P. Arunagam
Organising Chairperson, GATE 2025
On behalf of NCB-GATE
Ministry of Education (MoE)

d7927eef5f8486e60e7f840e6b103b99

A candidate is considered **qualified** if the marks secured are greater than or equal to the qualifying marks mentioned for the category, for which a valid category certificate, if applicable, must be produced along with this Score Card.

This Score Card is valid up to 31st March 2028.

GATE SCORE COMPUTATION

The GATE 2025 score is calculated using the formula:

$$\text{GATE Score} = S_q + (S_t - S_q)\frac{(M - M_q)}{(\bar{M}_t - M_q)}$$

where,
M is the normalised marks obtained by the candidate in the test paper mentioned on the GATE 2025 Score Card
M_q is the qualifying marks for general category candidates in the test paper
$\bar{M}_t$ is the mean of marks of top 0.1% or top 10 (whichever is larger) of all the candidates who appeared in the test paper
S_q = 350, is the score assigned to M_q, and
S_t = 900, is the score assigned to $\bar{M}_t$

In the GATE 2025 score formula, the qualifying marks (M_q) for the general category candidate in each subject will be : Cut-off marks for GENERAL category = max(25, min(40, μ + σ)). Here μ is the mean and σ is the standard deviation of positive marks of all the candidates who appeared in the tes: paper.

pg 1 of 2

GRADUATE APTITUDE TEST IN ENGINEERING 2025
अभियांत्रिकी स्नातक अभिक्षमता परीक्षा २०२५
Organising Institute: INDIAN INSTITUTE OF TECHNOLOGY ROORKEE
SCORE CARD

Name of the Candidate	ANKUR GREWAL
Name of the Parent/Guardian	JITENDRA KUMAR
Registration No.	CS25S18026047
Date of Birth	January 25, 2002
Test Paper	Computer Science and Information Technology (CS)
Date of Examination	February 1, 2025
GATE Score	390
*Marks out of 100	33.14

All India Rank (AIR) in the test paper:	15856	Qualifying Marks	
Number of candidates appeared for the test paper:	170825	General:	29.2
		EWS/OBC-NCL:	26.2
		SC/ST/PwD:	19.4

*Normalised marks across two sessions of the test paper

Prof. P. Arunagam
Organising Chairperson, GATE 2025
On behalf of NCB-GATE
Ministry of Education (MoE)

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A candidate is considered **qualified** if the marks secured are greater than or equal to the qualifying marks mentioned for the category, for which a valid category certificate, if applicable, must be produced along with this Score Card.

This Score Card is valid up to 31st March 2028.

GATE SCORE COMPUTATION

The GATE 2025 score is calculated using the formula:

$$\text{GATE Score} = S_q + (S_t - S_q)\frac{(M - M_q)}{(\bar{M}_t - M_q)}$$

where,
M is the normalised marks obtained by the candidate in the test paper mentioned on the GATE 2025 Score Card
M_q is the qualifying marks for general category candidates in the test paper
$\bar{M}_t$ is the mean of marks of top 0.1% or top 10 (whichever is larger) of all the candidates who appeared in the test paper
S_q = 350, is the score assigned to M_q, and
S_t = 900, is the score assigned to $\bar{M}_t$

In the GATE 2025 score formula, the qualifying marks (M_q) for the general category candidate in each subject will be : Cut-off marks for GENERAL category = max(25, min(40, μ + σ)). Here μ is the mean and σ is the standard deviation of positive marks of all the candidates who appeared in the tes: paper.

pg 1 of 2

Ankur Grewal has successfully qualified the GATE 2025 exam in the Computer Science and Information Technology (CS) paper, scoring 33.14 out of 100. With a GATE score of 390, he secured an All India Rank of 15856 among thousands of candidates. His marks exceed the qualifying criteria across various categories, showcasing his strong performance and dedication in this highly competitive examination. This achievement opens doors for further academic and professional opportunities in the field of computer science.

DEPARTMENT OF CSE

STUDENT ACHIEVEMENTS

The certificate from the International Journal for Research in Applied Science & Engineering Technology (IJRASET) confirms that the research paper titled "AI Virtual Mouse" by Deepanshu has undergone a thorough review process and has been deemed suitable for publication. The paper is published in Volume 13, Issue 1, May 2025, under the paper ID IJRASET/190308.

The certificate from the International Journal for Research in Applied Science & Engineering Technology (IJRASET) confirms that the research paper titled "AI Virtual Mouse" by Ahas undergone a thorough review process and has been deemed suitable for publication. The paper is published in Volume 13, Issue 1, May 2025, under the paper ID IJRASET/190308.

DEPARTMENT OF CSE

ARTICLE

The Rise of AI in Everyday Life: Benefits and Ethical Challenges

Artificial Intelligence (AI) has rapidly become an integral part of everyday life, transforming the way we live, work, and communicate. From virtual assistants like Siri and Alexa to recommendation algorithms on streaming platforms, AI technologies are designed to make daily tasks easier, faster, and more personalized. These advancements have streamlined various industries, including healthcare, finance, and transportation, enhancing efficiency and offering innovative solutions to complex problems. For example, AI-powered diagnostics help doctors detect diseases earlier, while autonomous vehicles promise safer and more efficient travel.

The benefits of AI extend beyond convenience. It has the potential to significantly boost productivity by automating repetitive tasks, allowing humans to focus on creative and strategic work. In education, AI-driven tools provide personalized learning experiences tailored to individual student needs, making education more accessible. Moreover, AI aids in data analysis on a scale that humans cannot match, helping businesses make better decisions and governments improve public services. This technological evolution is not just about automation but about augmenting human capabilities.

However, the rise of AI also brings important ethical challenges that must be addressed. One major concern is privacy, as AI systems often rely on vast amounts of personal data to function effectively. The potential misuse or unauthorized access to this data can threaten individual privacy and security. Additionally, AI algorithms can unintentionally perpetuate biases present in training data, leading to unfair treatment or discrimination in critical areas such as hiring, law enforcement, and lending. Ensuring transparency and fairness in AI systems is crucial to prevent societal harm.

Another pressing ethical issue is the impact of AI on employment. While AI can create new job opportunities, it also risks displacing many workers, especially in roles involving routine tasks. This shift demands proactive measures like reskilling and education to prepare the workforce for a changing job market. Furthermore, the question of accountability arises when AI systems make decisions with significant consequences—who is responsible if an autonomous vehicle causes an accident or an AI-based medical diagnosis goes wrong? Balancing innovation with ethical oversight will be key to harnessing AI's full potential while protecting society's values.

BY VIJAY KUMAR SHARMA
Assistant Professor

DEPARTMENT OF CSE

ARTICLE

Cybersecurity Trends in 2025

As technology continues to evolve at a rapid pace, cybersecurity in 2025 has become more critical than ever. With the increasing reliance on digital infrastructure, organizations and individuals face sophisticated cyber threats that demand advanced defense mechanisms. One of the major trends this year is the widespread adoption of AI-driven cybersecurity tools. These tools use machine learning algorithms to detect and respond to threats in real time, identifying patterns and anomalies faster than traditional methods. This proactive approach helps prevent attacks before they can cause significant damage, enhancing overall security posture.

Another significant trend is the rise of Zero Trust Architecture, a security model that assumes no user or device should be trusted by default, even inside the network perimeter. This approach enforces strict verification processes at every access point, limiting the potential damage from breaches. As more businesses move to hybrid and remote work environments, Zero Trust principles help secure distributed systems and cloud services by ensuring that every access request is continuously authenticated and authorized. This shift marks a major change from conventional perimeter-based security strategies.

The proliferation of Internet of Things (IoT) devices also presents unique cybersecurity challenges in 2025. As smart devices become more embedded in homes, cities, and industries, they create numerous entry points for cybercriminals. Protecting these devices requires specialized security protocols and continuous monitoring to prevent exploitation. Additionally, the increasing use of connected medical devices and critical infrastructure systems means that breaches could have serious real-world consequences, making IoT security a top priority for cybersecurity professionals.

Finally, privacy regulations and data protection laws continue to shape the cybersecurity landscape. Governments worldwide are enacting stricter regulations to protect citizens' personal data, compelling organizations to adopt more transparent data handling practices. Compliance with laws such as GDPR and emerging regulations in other regions drives companies to invest in robust cybersecurity frameworks. Alongside regulatory pressure, growing public awareness of privacy rights motivates users to demand better security from service providers, pushing cybersecurity to the forefront of digital innovation.

BY ANKUSH GUPTA
Assistant Professor

DEPARTMENT OF CSE

ARTICLE

Fake News Detection Using LSTM

In the age of social media and rapid information sharing, fake news has become a serious issue, influencing public opinion, spreading misinformation, and even impacting elections and public health. Detecting fake news manually is time-consuming and often ineffective due to the sheer volume of content published daily. This is where machine learning, specifically deep learning techniques like **Long Short-Term Memory (LSTM)** networks, plays a crucial role. LSTM is a type of Recurrent Neural Network (RNN) designed to handle sequential data and is particularly effective for natural language processing tasks such as fake news detection.

LSTM networks are capable of learning long-term dependencies in text, which makes them ideal for understanding the context and semantics of news articles. By processing word sequences one at a time while retaining important information from previous words, LSTM can determine whether the overall tone, structure, or content of a news article is likely to be real or fake. The model is trained on labeled datasets containing both real and fake news so that it learns to differentiate based on linguistic patterns, sentence structures, and vocabulary usage.

One of the advantages of using LSTM for fake news detection is its ability to handle varying lengths of text, which is common in news data. Moreover, when combined with techniques like word embeddings (e.g., Word2Vec or GloVe), LSTM models can better understand the meaning of words in context. This improves classification accuracy by enabling the model to detect subtle differences in writing styles or misleading phrases commonly found in fake news articles. LSTM can also be integrated into end-user applications such as browser extensions or social media platforms to flag suspicious content in real-time.

However, despite its strengths, LSTM-based fake news detection also faces challenges. The performance of the model heavily depends on the quality and diversity of the training data. Biased or unbalanced datasets can lead to inaccurate predictions. Additionally, fake news creators are constantly evolving their techniques, making it necessary to regularly update and retrain the model. Ensuring transparency, interpretability, and fairness in LSTM-based systems remains an active area of research, as the ultimate goal is not just accuracy, but also trust and accountability in automated content moderation.

By Mr. Vivek Kmar
Assistant Professor

DEPARTMENT OF CSE

ARTICLE

The Evolution of Education Technology: Interactive Learning and VR Classrooms

The field of education has undergone a remarkable transformation in recent years, driven largely by advancements in technology. From chalkboards to digital whiteboards, and textbooks to e-books, the tools used for teaching and learning have evolved rapidly. One of the most significant shifts has been the move from passive learning to interactive learning, where students engage more actively with content through multimedia, simulations, and gamified experiences. These tools not only make learning more enjoyable but also improve retention and understanding by catering to various learning styles.

Interactive learning platforms such as Kahoot!, Google Classroom, and Edmodo have empowered both educators and students to participate in more dynamic and personalized educational experiences. These platforms allow real-time feedback, peer collaboration, and adaptive learning pathways based on individual performance. This approach has especially proven beneficial in remote and hybrid learning environments, where maintaining student engagement can be challenging. The shift toward learner-centric models ensures that education is no longer one-size-fits-all but tailored to meet diverse student needs.

One of the most exciting frontiers in education technology is the use of **Virtual Reality (VR)** and **Augmented Reality (AR)**. VR classrooms offer immersive experiences where students can explore historical sites, conduct scientific experiments, or travel inside the human body—without ever leaving the classroom. This not only enhances understanding but also inspires curiosity and critical thinking. VR environments simulate real-world experiences, which are particularly useful for technical, medical, and engineering education where hands-on practice is crucial.

As these technologies become more accessible and affordable, educational institutions are increasingly adopting VR tools to complement traditional teaching methods. For example, platforms like ClassVR and ENGAGE allow educators to create custom VR lessons that align with curriculum goals. Additionally, AR applications are being used in classrooms to overlay digital information onto physical objects, helping students grasp complex concepts with visual aids. These immersive technologies bridge the gap between theory and practice, making learning more experiential and effective.

However, the evolution of education technology also brings challenges. Not all schools have the infrastructure or funding to adopt these advanced tools, leading to a digital divide. Teacher training is also crucial—educators must be equipped with the skills to integrate technology effectively into their teaching practices. Furthermore, there are concerns around data privacy, screen time, and over-reliance on technology. Despite these issues, the continued innovation in educational technology holds tremendous promise for the future, offering more engaging, inclusive, and effective learning experiences for students around the world.

By Dr. Vikas Srivastava
Head & Professor

DEPARTMENT OF CSE

ARTICLE

Advancements in Personalized Medicine: How AI is Tailoring Healthcare

The healthcare industry is experiencing a revolutionary shift with the rise of **personalized medicine**, an approach that tailors medical treatment to the individual characteristics of each patient. Unlike the traditional "one-size-fits-all" model, personalized medicine considers genetic, environmental, and lifestyle factors to deliver more precise, effective, and timely care. At the heart of this transformation is **Artificial Intelligence (AI)**, which is driving innovation by analyzing vast amounts of data and uncovering patterns that were previously undetectable by human experts.

AI technologies, particularly machine learning algorithms, are being used to analyze genomic data, electronic health records (EHRs), and medical imaging to identify biomarkers and predict disease risks. For instance, AI can determine how a specific patient might respond to a certain drug based on their genetic makeup, minimizing trial-and-error prescribing. This enables **precision treatment plans** that reduce side effects, increase drug efficacy, and improve patient outcomes. In oncology, for example, AI-assisted tools are helping doctors select targeted therapies based on tumor genomics, significantly advancing cancer care.

Moreover, wearable devices and mobile health apps powered by AI are playing a crucial role in real-time health monitoring. These tools collect continuous data on vital signs, activity levels, and sleep patterns, which can be analyzed to detect early warning signs of chronic conditions like diabetes or heart disease. This data-driven approach empowers patients to take control of their health while allowing doctors to intervene early, preventing complications and reducing hospitalizations. Personalized medicine thus moves beyond reactive care to a more **preventive and proactive** healthcare model.

Despite the exciting progress, the integration of AI in personalized medicine does come with challenges. Ensuring data privacy and security is critical, especially when dealing with sensitive genetic information. There is also the risk of algorithmic bias if AI systems are trained on non-diverse datasets. Additionally, the adoption of these technologies requires significant investment, education, and trust from both healthcare providers and patients. Regulatory frameworks must also evolve to ensure the ethical and responsible use of AI in clinical settings.

Nevertheless, the potential benefits far outweigh the obstacles. As AI continues to mature, it is poised to make personalized medicine more accurate, affordable, and widely accessible. By aligning treatment strategies with individual patient profiles, healthcare is becoming more human-centric and effective. The fusion of AI and personalized medicine represents not just a technological advancement, but a shift toward a future where healthcare is truly **tailored to the individual**, leading to better outcomes and improved quality of life for all.

By Diya Verma
Roll No. 2300680100114
Student 2nd Year

DEPARTMENT OF CSE

ARTICLE

Blockchain Beyond Cryptocurrency: Real-World Applications in 2025

When blockchain technology first emerged in 2008, it was primarily associated with Bitcoin and other digital currencies. While cryptocurrency remains a major use case, the true potential of blockchain lies far beyond digital coins. In 2025, blockchain has matured into a versatile and powerful technology that is reshaping industries through its core features: decentralization, transparency, security, and immutability. From supply chains to voting systems, blockchain is becoming a foundational technology in solving real-world problems across the globe.

1. Revolutionizing Supply Chain Management

One of the most transformative uses of blockchain today is in **supply chain management**. Companies are now using blockchain to track goods from production to delivery with full transparency. Each stage of the product's journey is recorded in a tamper-proof digital ledger, ensuring authenticity and traceability. This is especially useful in industries like food, pharmaceuticals, and luxury goods, where counterfeit products and fraud have long been issues. For example, major retailers are using blockchain to verify the origin of organic produce or ensure that temperature-sensitive vaccines are stored and transported under proper conditions.

2. Enhancing Data Security and Identity Verification

In a world increasingly driven by data, **cybersecurity** and **identity management** are critical concerns. Blockchain offers a secure alternative to traditional centralized databases, reducing the risks of hacking and data breaches. With blockchain-based digital identity systems, users have control over their personal data and can share it selectively. Governments and private organizations are adopting decentralized identity solutions to streamline processes like KYC (Know Your Customer), passport verification, and access to government services—all while minimizing the risk of identity theft.

3. Smart Contracts and Automation

Another key innovation powered by blockchain is the use of **smart contracts**—self-executing contracts with the terms of the agreement written directly into code. These contracts automatically enforce themselves when conditions are met, reducing the need for intermediaries and speeding up transactions. In 2025, industries such as insurance, real estate, and legal services are increasingly adopting smart contracts to automate processes like claim settlements, property transfers, and agreement enforcement, improving efficiency and reducing fraud.

4. Transparent Governance and Voting Systems

Blockchain is also bringing transparency and trust to **governance and voting systems**. Countries and local governments are experimenting with blockchain-based voting to ensure fair and tamper-proof elections. Voter identities can be verified securely, and ballots can be cast remotely while maintaining anonymity and integrity. These systems help reduce fraud, increase voter participation, and restore public confidence in democratic processes. In 2025, several pilot programs around the world have shown promising results in using blockchain for secure, transparent, and efficient elections.

5. Transforming Finance Beyond Cryptocurrencies

While blockchain began with cryptocurrencies, it has since expanded to power the **decentralized finance (DeFi)** movement. DeFi platforms enable users to borrow, lend, invest, and trade assets without traditional banks. In 2025, more institutions are embracing blockchain for cross-border payments, real-time settlements, and improved auditability. Central banks are also developing **Central Bank Digital Currencies (CBDCs)** built on blockchain infrastructure, blending the benefits of digital payments with the stability of fiat currency

By Pranav Bansal
Roll No. 2300680100214
Student 2nd Year

DEPARTMENT OF CSE

ARTICLE

Generative AI and Its Impact on Software Development

The field of software development is undergoing a major transformation, thanks to the rise of **Generative AI**—a branch of artificial intelligence capable of creating content, code, images, and even entire applications. Tools like **GitHub Copilot**, **ChatGPT**, and **CodeWhisperer** are already assisting developers by generating code snippets, auto-completing functions, and suggesting logic based on natural language prompts. As we step into 2025, Generative AI is no longer just a novelty—it's becoming an indispensable part of the modern software development workflow.

At the core of generative AI's impact is **productivity enhancement**. Developers can now write and debug code faster, automate documentation, and generate boilerplate code in seconds. These tools are particularly beneficial for routine tasks, allowing developers to focus more on architecture, logic, and innovation. For junior developers, AI serves as a real-time tutor, providing code suggestions and explanations that accelerate learning and reduce dependency on senior team members.

Another significant impact is on **collaborative development and DevOps**. AI can assist in reviewing pull requests, detecting bugs, and even predicting potential runtime errors before deployment. Integrating generative AI into continuous integration and delivery (CI/CD) pipelines speeds up software release cycles while maintaining high quality. Additionally, AI-generated test cases and scenarios help in strengthening application reliability and security, minimizing human error in high-stakes environments.

However, the adoption of generative AI in software development isn't without concerns. **Code quality, plagiarism, and security vulnerabilities** in AI-generated code remain hot topics. Since many AI models are trained on open-source repositories, there's a risk of replicating code with licensing issues or inheriting flawed logic. Furthermore, over-reliance on AI can lead to a decline in critical thinking and problem-solving skills among developers, making it essential to strike a balance between AI assistance and human oversight.

Looking ahead, generative AI is poised to become an integral part of the software engineering ecosystem. It will not replace developers but **augment their capabilities**, acting as a creative partner that accelerates innovation. As AI continues to improve in understanding context, business logic, and natural language, the collaboration between humans and machines will redefine the boundaries of what's possible in software development—making it more efficient, accessible, and intelligent than ever before.

By Tushar Gupta
Roll No. 2200680100339
Student 3rd Year

DEPARTMENT OF CSE

ARTICLE

Cybersecurity in the Age of AI-Driven Attacks

In 2025, the cybersecurity landscape has entered a new era—one defined by both unprecedented threats and equally advanced defenses. As artificial intelligence (AI) continues to evolve, so do the methods employed by cybercriminals. AI-driven attacks are no longer science fiction; they are a reality, making cybersecurity more complex and critical than ever before. These intelligent attacks are faster, more adaptive, and harder to detect, pushing organizations to rethink how they protect their digital assets.

One of the most concerning trends is the use of **AI to automate cyberattacks**. Tools powered by machine learning can analyze systems, identify vulnerabilities, and launch attacks without human intervention. For example, AI can craft highly personalized phishing emails using publicly available data—dramatically increasing the success rate of social engineering. Deepfake technology is also being weaponized to impersonate executives or public figures, deceiving employees and spreading misinformation. These attacks are not only sophisticated but scalable, allowing cybercriminals to target thousands simultaneously.

At the same time, defenders are not powerless. AI is also a powerful tool in the hands of cybersecurity professionals. **AI-powered threat detection systems** can monitor massive amounts of network traffic in real-time, identify anomalies, and respond to threats faster than any human could. Behavioral analytics, for instance, allows systems to flag unusual user activity that might signal a breach, while predictive algorithms help anticipate future threats based on patterns and trends. This creates a continuous cycle of learning and adaptation between attackers and defenders.

However, the growing reliance on AI in cybersecurity also raises **new ethical and technical challenges**. If defensive AI systems make decisions autonomously—such as shutting down parts of a network or flagging users as threats—who is responsible for errors or overreach? Additionally, if AI models are trained on flawed or biased data, they may misinterpret behavior or overlook threats entirely. There's also the risk that these systems themselves become targets of attacks, as adversaries attempt to poison datasets or manipulate models from within.

In conclusion, the age of AI-driven cyberattacks demands a new mindset—one that views cybersecurity not as a static shield, but as a dynamic, evolving system. Organizations must invest in both cutting-edge technology and continuous education for their teams. Collaboration between industry, government, and academia is also essential to share threat intelligence and develop robust defense strategies. As AI becomes more embedded in both attacks and defenses, the future of cybersecurity will depend on our ability to stay one step ahead—not just technologically, but strategically and ethically.

By Gunn Bansal
Roll No. 2200680110044
Student 3rd Year

DEPARTMENT OF CSE

RESEARCH

S. No.	Paper Title	Authors	Indexing (SCI/ESCI/ SCOPUS/Other)	Paper link
1	Data Privacy Management in Cloud Computing	Kanika Jain, Diksha Gupta, Jhalak Wadhwa, Kanak gupta, Mr. amit kumar	Other	https://ijirt.org/publishedpaper/IJIRT171577_PAPER.pdf
2	Next Word Prediction	Anas Khan, Aazain Khan, Abhinav Chaudhary, Ahmed Mehdi Zaidi, Mr. amit kumar	Other	https://www.ijset.in/wp-content/uploads/IJSET_V13_issue2_315.pdf
3	Faculty Recommendation System	mayank Chauhan,yoginder singh,vanshika vishnoi,vanshika jindal, Mr. amit kumar	Other	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5213252
4	MULTIUSER CHATTING SYSTEM	Mukul Vats,Shubhankar ,Shivam Panwar,Himanshu Kumar, Mr. amit kumar	Other	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5209134
5	IOT based Smart Irrigation System	Amit Kumar Mishra, Nikhil Kumar, Vansh Sharma, Vikash Chauhan, Dr. Satendra Kumar	Other	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5227801
6	A Hybrid Approach for Leaf Disease Detection Using Convolutional Neural Networks and Vision Transformers	Ayush Sharma, Ayush Singh, Atul Kumar, Ayushi Tyagi, Dr. Satendra Kumar	Others	https://www.ijfmr.com/research-paper.php?id=38929
7	AGRIGUARD: Crop Disease Prediction and Fertilizer Recommendation System using CNN Model	Arpit Nehra, Anjali , Anusuiya , Hamza, Dr. Satendra Kumar	Others	https://ijnrd.org/viewpaperforall.php?paper=IJNRD2505524
8	Detection of communal post(DCM) using machine learning	Parth Gupta, Muskan Gahlot, Aseem Gupta, Shriyansh Goel, Mr. Vivek Kumar	Others	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5241213
9	OptiPark: an intelligent parking management system using computer vision for real-time monitoring and automated billing	Anuj Kumar, Himanshu, Ayush Rastogi, Prashant Chaudhary, Mr. Vivek Kumar	Others	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5227794
10	Driver Drowsiness Detection system	Abheek kumar Jayant, kartikey, pragya , abhinav, Altamash Sheikh	others	https://zenodo.org/records/15375318
11	A Machine Learning-Powered Framework for Diabetes Prediction with Real-Time Web Deployment	kriti, arsh jindal, Altamash Sheikh	others	https://ijirt.org/publishedpaper/IJIRT180099_PAPER.pdf

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12	Sentimental Analysis and Opinion Minining of Amazon Review	Kartik Kumar, Sidharth Singh, Sagar Chaudhary, Kartik Tyagi, Ms. Neha Prakash	others	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5212469
13	CAMSAFE Safety Camera	Mohd Arshan, Lakshay Pratap Singh, Mohd Sameer Khan, Mohd Anas, Ms. Neha Prakash	Other	https://www.google.com/url?q=https://ssrn.com/abstract%3D5224188&source=gmail&ust=1751091761823000&usg=AOvVaw2TZbo62_R9zkF1csujZs-5
14	Agro Advisor for farmer using ML	Anukriti Tonk, Shruti Tripathi , Priyanshu Goel, Shambhavi Shukla, Ms. Soni Panwar	Other	https://ijirt.org/publishedpaper/IJIRT175163_PAPER.pdf
15	Crop Recommendation system using Soft Computing approach	Aditi Sharma , Tanu Dhaka, Aditi Chaudhary, Sneha Aggarwal, Ms. Soni Panwar	Other	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5241182
16	Diabetes prognosis using machine learning	Anshika sharma, Atharva, Aditya Pratap Singh, Divasha, Ms. Sonika Jalhotra	Other	https://www.ijariit.com/manuscript/diabetes-prognosis-using-machine-learning/
17	AI virtual mouse	Deepanshu, Bhanu Sharma, Aman Rathi, Chitraveer Singh, Jagbeer Singh	Other	https://doi.org/10.22214/ijraset.2025.70308
18	tracking the suspicous activity of a account holder(money transfering	Atirek Mani Diggal, Anushka Sharma, Vatsal Sharma, Ansh Narayan, Srishti Vashisht	Other	https://www.ijariit.com/manuscript/an-intelligent-banking-management-system-with-fraud-detection/
19	Cardiomegaly Prediction Using Transfer Learning	Samridhi Sharma, Ayush Baliyan, Ayush Sharma, Ayush Jawla, Srishti Vashisht	Other	https://www.ijfmr.com/research-paper.php?id=44128
20	A NOVEL MACHINE LEARNING APPROACH TO DESIGN CROP RECOMMENDATION SYSTEM	Laeeq Ahmed, Nitish Sharma, Nitish Sharma, Madhav Bathla, Khushank Gautam, Srishti Vashisht	Others	https://www.ijnrd.org/track.php?r_id=306130
21	Crop Prediction System	Pavitra Gupta, Iti Jain, Jhalak Tomar, Harshit Kumar, Prerna	Others	https://ijirt.org/publishedpaper/IJIRT177326_PAPER.pdf

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22	Bloodline : an Efficient Interface for Urgent Blood Availability	Aamir, Abhishek, Abhishek Chaudhary, Vineet Gola, Dr. Ajai Kumar	Others	https://journals.stmjournals.com/frm_file/aWQ6MjEwMDM1fGZpbGVuYW1lOmVkMzkwYjRkLTI4LTM2LWJsb29kbGluZS1hLWVmZmljaWVudC1pbnRlcmZhY2UtZm9yLXVyZ2VudC1ibG9vZC1hdmFpbGFiaWxpdHkucGRm
23	Deep Fake Face Detection Using Computer Vision	Yash Sharma, Tanvi Bansal, Tanya Garg, Yash Chaudhary, Ms Priyanka	Others	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5241174
24	Defect Identification in Water Bottles Using Deep Learning-B	Sonu, Yash Bhardwaj, Shuchi verma, Prakhar Sahu, Ms Priyanka	Others	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5224199
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26	Enhanced Real-Time Traffic Sign Recognition System with Multilingual Captions and Voice Alerts	Harsh pal, Krishna Parashar, Azeem Hussain, Ms Priyanka	Others	https://www.ijnrd.org/papers/IJNRD2505028.pdf
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28	Deepfake video face detection using deep learning	Vasu Tyagi, Prayas Chaudhary, Rajnish Kumar Bhardwaj, Prasuk Jain, Ms. Sonika Jalhotra	Others	https://doi.org/10.5281/zenodo.15429570
29	Medicine Recommendation System based on Sentiment Analysis of Medicine Reviews using Machine Learning	Lavi Kaushik, Parth Chugh, Mashrufa Mondal, Kashish Verma, Mr. Ankush Gupta	Others	https://ijirt.org/publishedpaper/IJIRT178509_PAPER.pdf
30	Innovative AI Solution for real-time translation of dyanamic sequential sign language	harsh tyagi, Jaivardhan Saini, Gaurav yadav, saksham pandey, Vani Rastogi	Others	https://ijirt.org/Article?manuscript=178607

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31	Revenue Forecasting of a company	Vaibhav Tyagi, Vedansh Kumar Tyagi, Vivek Chauhan, Yash Rana , Mr. Ankush Gupta	Others	https://ijsdr.org/papers/IJSDR2504363.pdf
32	Mood Based Movie Recommendation System	Purvi Rastogi, Rashi Gupta, Radhika Gupta, Riyanshi Goel, Mr. Md Shahid	Others	https://www.ijaresm.com/mood-based-movie-recommendation-system
33	Fake profile identification	Ujjwal Sharma, Shudhansh Malik, Vansh Sharma, Uday Pratap Singh Walia, Ms. Priya Kumari	Others	https://digitalxplore.org/proceeding.php?pid=2943
34	Advancements in Face Expression Recognition: A Comparative Analysis of CNN and CRIP Methods	Sparsh Singhal, Dushyant Tyagi, Divyansh Agarwal, Ishank Jain, Ms. Priya Kumari	Others	https://ijercse.com/face-expression.php

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Ananya Sharma
Commvault
29.5 LPA

Nimisha Jain
Commvault
29.5 LPA

Shivani Verma
AWS
27.15 LPA

Sambhav Jain
AWS
27.15 LPA

Utkarsh Gupta
Commvault
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Prachi Chaudhary
Adobe
19 LPA

Gautam Mishra
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18 LPA

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Mudit Bansal
CloudSEK
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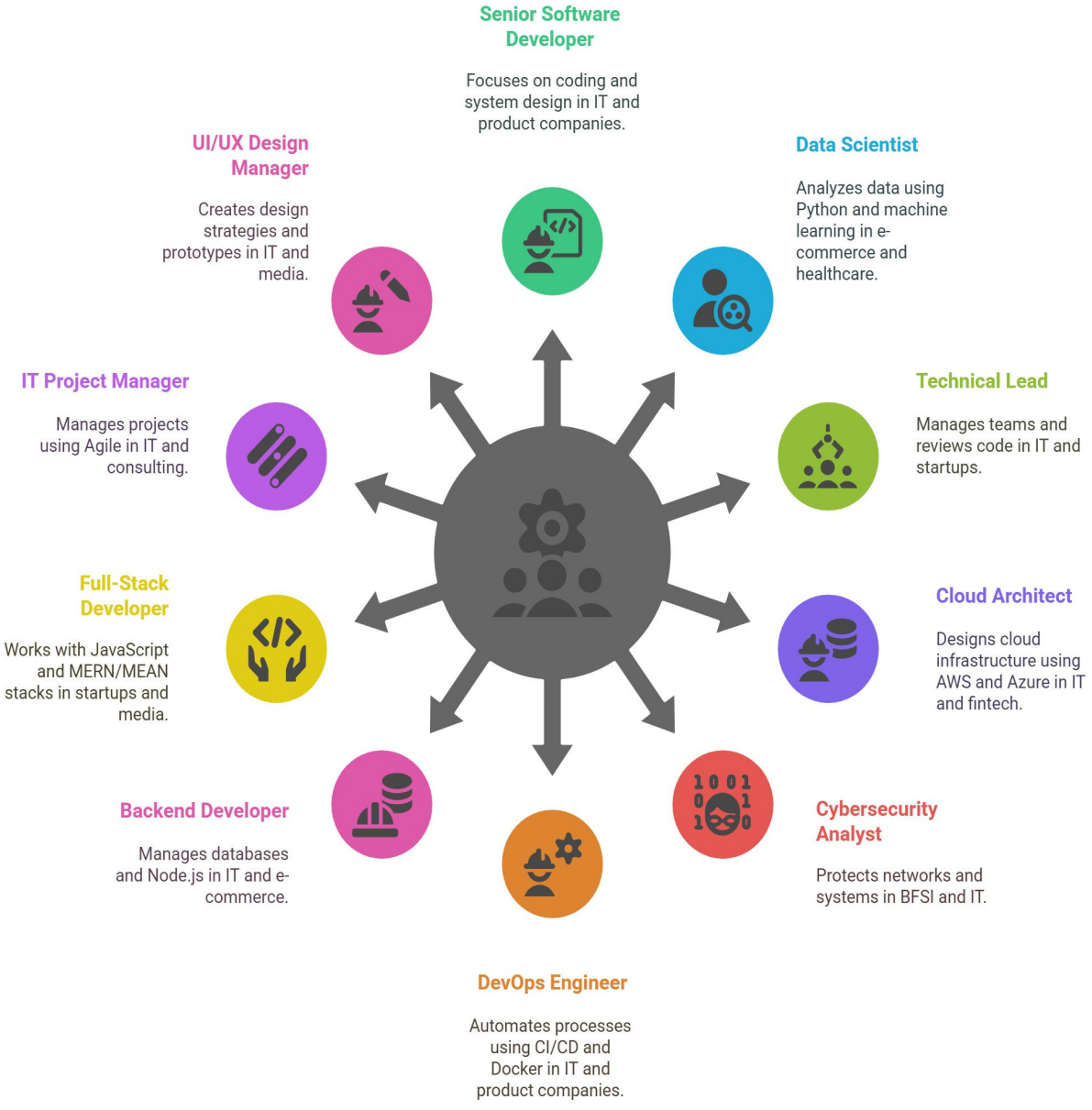
Career Paths in Computer Science



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