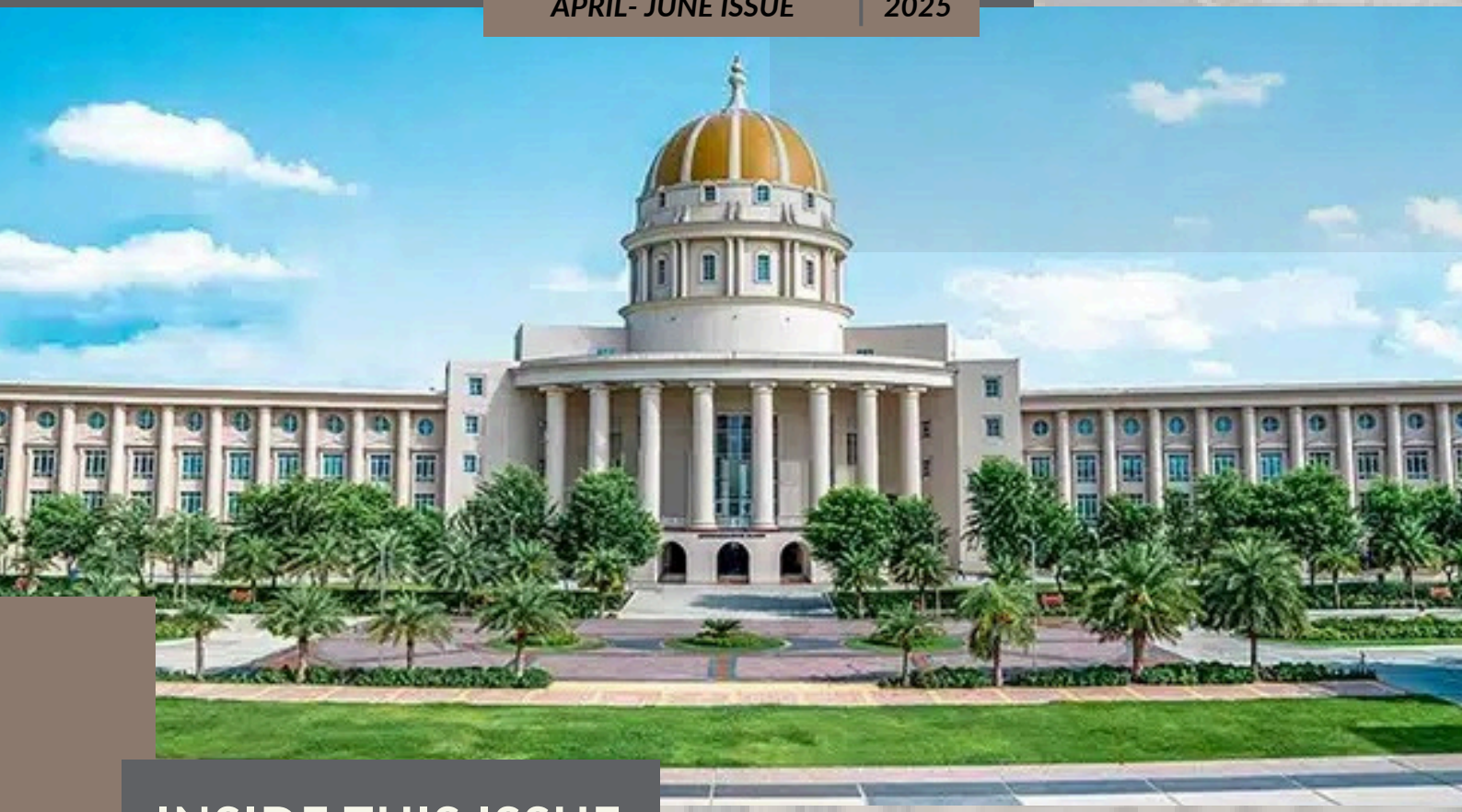
MANIPAL UNIVERSITY
JAIPUR

IT COMPENDIUM

DEPARTMENT OF INFORMATION TECHNOLOGY

Unleashing Potential,
Transforming Futures

APRIL- JUNE ISSUE | *2025*



INSIDE THIS ISSUE

CHIEF EDITOR:-

Dr. Pratistha Mathur, HOD of Information Technology

FACULTY EDITOR:-

Dr. Shweta Sharma, Department of Information Technology

STUDENT EDITOR:-

Yash Kamra, 4th Year
Swayam Bansal,3rd Year
Aanya Katiyar, 3rd Year
Aakash Srivastava, 3rd Year

MESSAGES

MESSAGE BY ASSOCIATE DEAN

Dear Readers,
The Department of Information Technology at Manipal University Jaipur continues to evolve as a hub of academic excellence, innovation, and industry alignment.

Since its inception in 2012, the Department has grown into a thriving ecosystem—home to state-of-the-art laboratories, a future-ready curriculum, and a distinguished faculty dedicated to academic excellence, innovation, and impactful research.

Our programs are thoughtfully designed to equip students with both foundational and advanced computing knowledge. From mastering basic concepts to creatively solving real-world problems through research and innovation, we aim to empower our students to become industry- and society-ready professionals. Beyond technical competence, we strive to ignite curiosity, nurture creativity, and cultivate a research-driven mindset.

This newsletter marks a new chapter in our journey—a platform to celebrate our achievements, share insights, and reflect the vibrant spirit of our department.

I warmly invite you to explore, engage, and be inspired.

Prof. (Dr.) C. S. Lamba
Associate Dean,
School of Computer Science and Engineering

MESSAGE BY HOD

Think beyond theoretical frameworks- our world-class industry ties open doors to real-world challenges and opportunities. Through Value-Added Courses, MOOCs, Workshops, and Industrial Visits, you'll test your mettle, hone your skills, and network with the pioneers shaping the digital landscape. Our mission is your success. We support, guide, and empower you every step of the way as you craft your unique code in the symphony of the digital revolution. This isn't just a department; it's a launchpad, a community, and your home in the heart of the IT revolution. Join us, innovators, dreamers, and builders. Let's rewrite the very definition of an IT professional, together. Welcome to the Department of Information Technology at Manipal University Jaipur. Welcome to your future.

Prof. Pratistha Mathur
HoD, Department of IT

Department of IT – Manipal University Jaipur

Established in 2012, the Department of Information Technology at Manipal University Jaipur is committed to bridging the gap between academia and industry. We offer a cutting-edge curriculum designed to equip students with the latest technical knowledge and industry-relevant skills.

Our department prepares students for the evolving global IT landscape by fostering innovation, research, and hands-on learning. With state-of-the-art computing facilities, we provide a comprehensive curriculum covering fundamental programming languages to advanced domains such as Machine Learning, Cloud Computing, Networking, Image Processing, Android Development, and the Internet of Things (IoT).

Designed to meet industry demands, our curriculum emphasizes practical applications and real-world problem-solving. We actively collaborate with leading industries in areas like Computer Networking, Data Mining, Big Data Analytics, Computer Vision, Cloud Computing, and Cybersecurity. Additionally, the department maintains strong affiliations with prestigious research communities, including IEEE, CSI, ACM, and NVIDIA, ensuring students stay at the forefront of technological advancements.

Through a blend of academic excellence, industry partnerships, and research opportunities, the Department of IT empowers students to thrive in the ever-evolving world of technology.

VISION

To achieve global excellence in higher education, research and human development by adapting innovations in IT domain.

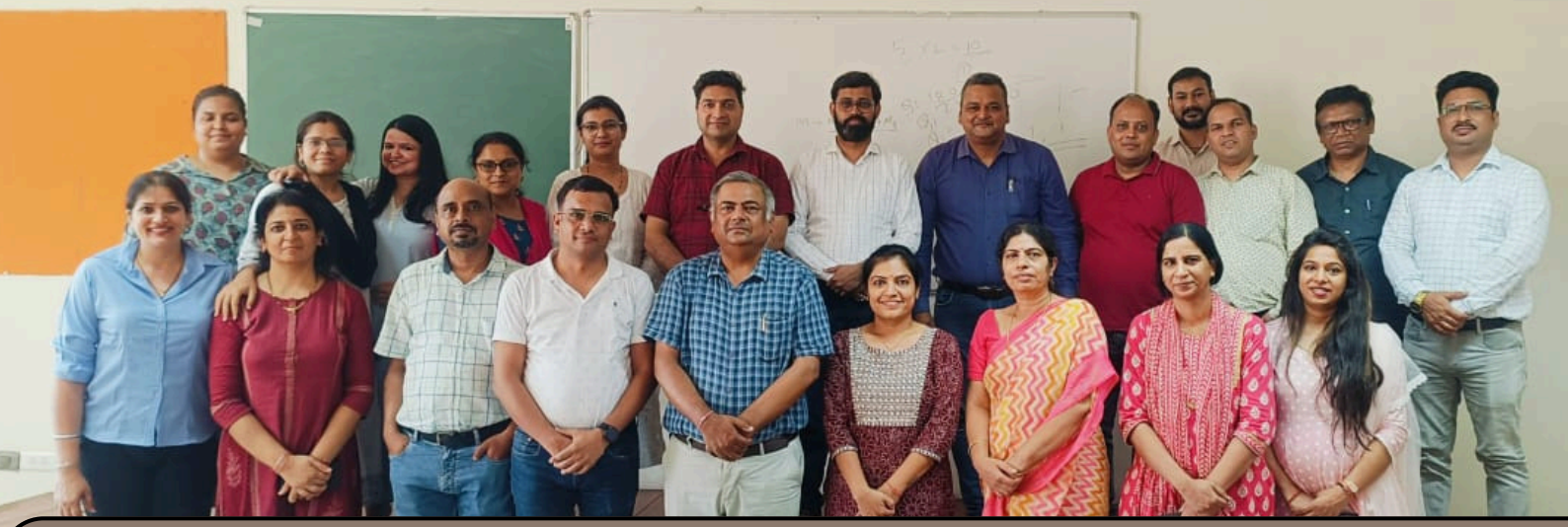
MISSION

To become the most inspirational department among the students and engineering aspirants who want to pursue their career in the field of Information Technology.

To foster academic, research, and professional excellence within the domain of Information Technology.

To transform young minds into competent IT professionals imbibing strong moral values.

FACULTY OF IT



Program Educational Objective (PEO)

- *To Imbibe the inquisitive practices in students to have thrust for innovation and excellence that leads to use research-based knowledge and research methods.*
- *To foster world-leading technological innovation to support teaching and learning, research and outreach.*
- *To support the students to acquire various knowledges and ski ls and nurture constructive attitude and behaviour.*
- *Promoting the development of resilience, determination, confidence, and creative and critical thinking among students.*
- *To support students to ensemble easily in integrated environment of learning and pragmatic implementation of concepts.*

LIST OF FACULTIES

Dr. Ankit Mundra
Mr. Anurag Bhatnagar
Dr. Anju Yadav
Dr. Ashish Jain
Dr. Avani Sharma
Dr. Bagesh Kumar
Mr. Chandrapal Singh Dangi
Dr. Debolina Ghosh
Dr. Devesh Kumar Srivastava
Dr. Ganpat Singh Chauhan
Dr. Kavita
Dr. Krishna Kumar
Dr. Krati Dubey

Dr. Lokesh Sharma
Dr. Narendra Singh Yadav
Ms. Nandani Sharma
Dr. Nirmal Kumar Gupta
Dr. Nripendra Narayan Das
Dr. Pankaj Vyas
Dr. Prakash Chandra Sharma
Dr. Pratistha Mathur
Dr. Rahul Saxena
Mr. Ravinder Kumar
Mr. Ravindra Saini
Ms. Rashmi Bartwal
Mr. Rohit Kumar Gupta

Dr. Shally Vats
Dr. Shalini Puri
Dr. Shikha Chaudhary
Dr. Shweta Sharma
Dr. Smaranika Mohapatra
Ms. Suman Saurabh Sarkar
Dr. Sulabh Bansal
Dr. Sumit Srivastava
Dr. Varsha Himthani
Ms. Vineeta Soni
Mr. Venkatesh Gauri Shankar
Dr. Vivek Kumar Verma
Mr. Vijay Prakash Sharma
Mr. Virender Dehru
Mr. Yogender Sharma

FACULTY ACHIEVEMENTS

DEPARTMENT OF INFORMATION TECHNOLOGY
RESEARCH DATA

Department of Information Technology – Research Highlights
Faculty of Engineering | School of CSE (CSE & IT)
Reporting Period: ***April 1 – June 31, 2025***

The Department of Information Technology at Manipal University Jaipur has shown commendable scholarly productivity and innovation in the second quarter of 2025. Our faculty and researchers have actively contributed to advancing knowledge through high-quality publications and intellectual property filings

Paper Title: Optimized DenseNet Architectures for Precise Classification of Edible and Poisonous Mushrooms

Journal Name: International Journal of Computational Intelligence Systems

Journal Details: Impact Factor 3, Science Citation Index Expanded (SCIE), Q2

Link:
https://link.springer.com/article/10.1007/s44196-025-00871-y

Name: DR. DEBOLINA GHOSH,
Assistant Professor (Senior Scale),
Department of Information Technology, Manipal University Jaipur.

Paper Title: Alzheimer's stage progression modeling using graph neural network and MRI biomarkers

Link:
https://link.springer.com/article/10.1007/s00521-025-11353-9

Date of Publication: 05 June 2025
Journal Name:
Neural Computing and Applications (Springer)

Indexing: SCI, SCOPUS (Q2) (2-5%)
Quartile: Q2

Name: **MR. VENKATESH GAURI SHANKAR,**
Assistant Professor (Senior Scale),
Department of Information Technology, Manipal University Jaipur.

STUDENT ACHIVEMENTS

DEPARTMENT OF INFORMATION TECHNOLOGY

In the realm of artificial intelligence, Mr. Mehul Singh, a first-year B.Tech student from Manipal University Jaipur's Department of Information Technology, is making waves. In the Google Cloud x Hack2Skill AI Hackathon, he was placed in the top 0.02% of participants worldwide. Additionally, Mehul received a renowned foreign scholarship, which is uncommon for an undergraduate. As Mehul develops the future of AI, MUJ is happy to support and applaud this creative talent.

Sajag Gupta and **Chinmayee Pandey** from Manipal University Jaipur achieved **First Place in Sociothon-2025**, a prestigious competition focused on innovative social solutions. The event was jointly organized by Gram Asha Club, Department of Chemistry (SPBS-FOSTA), E-Cell, and AIC-MUJ, aiming to foster creativity and social impact among students.

IT DEPARTMENT RESEARCH INDEX

FACULTY OF SCIENCE, TECHNOLOGY AND ARCHITECTURE | SCHOOL OF COMPUTER SCIENCE AND ENGINEERING-1 (CSE & IT)

REPORTING PERIOD: APRIL 1, 2025 – JUNE 30, 2025

The Department of Information and Technology at [University name, if needed] has demonstrated consistent research engagement and scholarly productivity during the second quarter of 2025. Faculty and researchers contributed to impactful journals, conferences, and intellectual property activities, strengthening the department's research culture.

RESEARCH PUBLICATIONS

During this period, the department produced a total of 16 research publications, including:

Journal publications: 9 total, with

- 7 in Q1-ranked journals
- 1 in Q2
- 1 in Q4

Conference publications:

- 4 total, with
- 3 Scopus-indexed
- 1 non-Scopus

Book chapter contributions: 2

- 1 Scopus-indexed book chapter
- 1 Scopus-indexed edited book

These results reflect an active participation in recognized journals and conferences, contributing to the department's scholarly visibility.

Innovation & Intellectual Property

Innovation continues to be a strategic priority for the department. In this quarter, faculty and researchers achieved:

- **1 patent published**
- **1 patent filed**

This highlights the department's continued commitment to converting academic research into practical solutions.

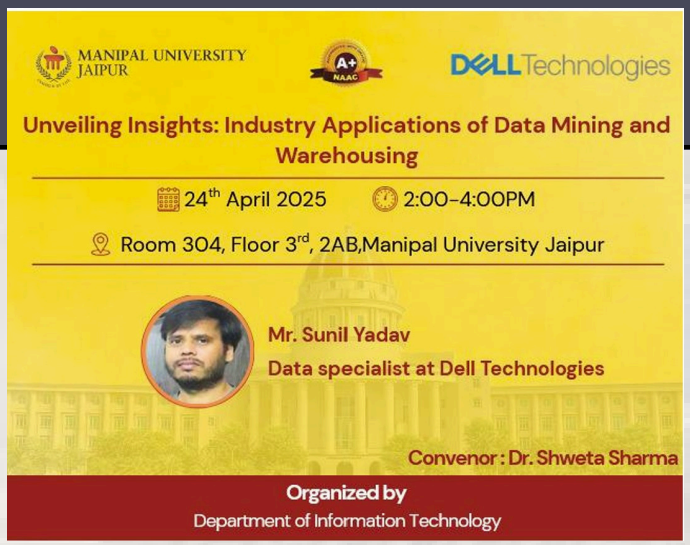
SUMMARY

As of June 2025, the department has a cumulative total of 16 research outputs and 2 active IPR filings. This reflects a strong foundation for further growth in research excellence and societal impact.

The department looks forward to sustaining this momentum in subsequent quarters, further cementing its role as a leader in innovation and research within the Faculty of Science, Technology and Architecture.

Industry Lecture:-

The Department of Information Technology at Manipal University Jaipur, in collaboration with Dell Technologies, organized an expert industry lecture on “Unveiling Insights: Industry Applications of Data Mining and Warehousing” on 24th April 2025. The session targeted 6th semester B.Tech IT students, aiming to deepen their understanding of data-driven cybersecurity innovations and the dual role of data mining and warehousing in modern AI applications.



Key Highlights:

Objective:

1. **Expose students to current trends, challenges, and innovations in cybersecurity, with a focus on data mining and warehousing management.**
2. **Promote critical thinking and ethical awareness around the use of data mining in intelligent systems.**

SDG Mapping:

- **SDG 4 (Quality Education) — Enhancing student learning through industry insights.**
- **SDG 9 (Industry, Innovation, and Infrastructure) — Building knowledge on future-ready industry infrastructures.**

SPEAKER

1. **Mr. Sunil Yadav (Data Mining and Warehousing Specialist, Dell Technologies):**
2. An experienced expert in secure systems architecture and AI-based threat mitigation strategies, Mr. Yadav shared valuable perspectives on the future of cybersecurity and skills needed for success in data-driven roles.

EVENT SEGMENTS

Interactive Talk (2 Hours):

1. Discussed the role of artificial intelligence in transforming data mining and warehousing, including its use in intelligent intrusion detection systems.
2. Shared best practices for modern data warehousing, including cloud-based, hybrid, and real-time architectures, and the critical role of ETL (Extract, Transform, Load) processes.

IMPACT

1. Students gained a clear understanding of how data mining and warehousing support intelligent cybersecurity systems and business innovations.
2. Faculty benefited from insights that can help embed more industry-relevant, application-oriented concepts in their courses.

DEPARTMENT PROGRAMS

KEY HIGHLIGHTS:

OBJECTIVES:

1. Understand the typical phases of an AI project lifecycle: problem scoping, data collection, model building, evaluation, and deployment.
2. Explore advanced AI frameworks, including agentic systems and digital twins, to drive operational efficiency and innovation.
3. Engage in domain-specific capstone projects using RapidMiner and other no-code AI platforms to apply AI concepts to real-world challenges.
4. Integrate the principles of ethical, transparent, and data-driven AI practices into academic and professional contexts.

SDG Mapping:

- **SDG 4** (Quality Education): Enhancing faculty skills for next-generation AI curricula.
- **SDG 9** (Industry, Innovation, and Infrastructure): Fostering innovation through technology-oriented faculty capacity building.

SPEAKER

1. Dr. Manoj Manuja, Founder & CEO, Mystik Minds
2. Dr. Nalika Ulapane, La Trobe University, Melbourne, Australia
3. Prof. Dr. Phayung Meesad, King Mongkut's University of Technology North Bangkok
4. Mr. Vijay Raj, Solution Engineer, ALTAIR

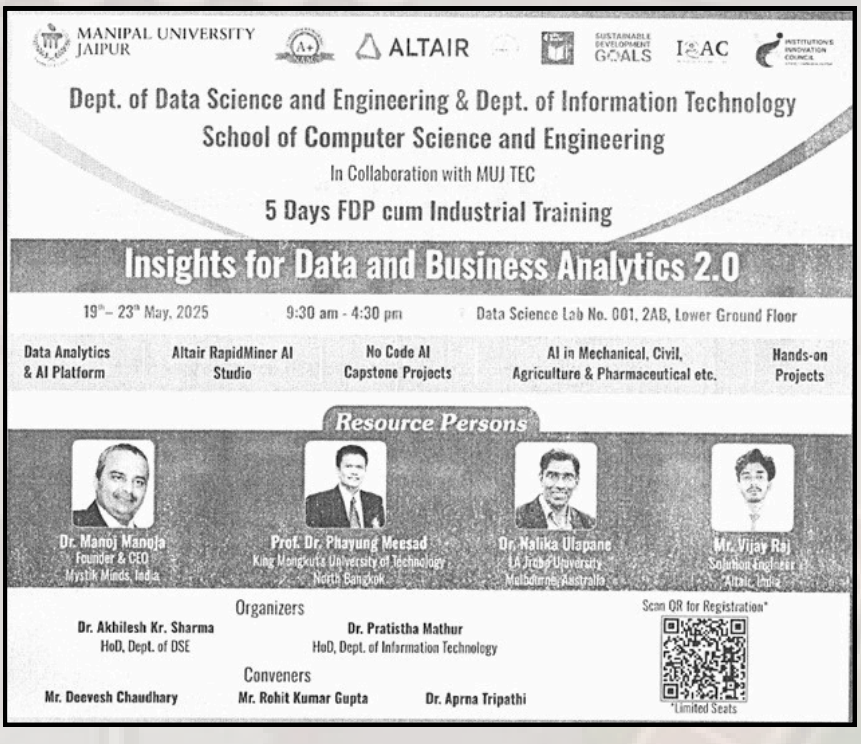
EVENT SEGEMENTS:

Interactive FDP Sessions:

- Delivered an overview of AI and its growing role in industries, professions, and daily life.
- Provided practical hands-on experience with RapidMiner AI Studio, a leading no-code AI development platform.
- Showcased domain-specific projects relevant to mechanical, civil, electronics, electrical, agricultural, pharmaceutical, commerce, and management streams.
- Highlighted cutting-edge trends such as agentic AI, digital twins, and data-governance frameworks for next-generation business solutions.
- Included discussions on real-world tools like Panopticon and Monarch, featuring use cases in healthcare, finance, retail, and manufacturing.
- Concluded with interactive feedback and a reflection segment, supporting participants in integrating AI frameworks into their teaching, research, or professional practices.

IMPACT :

1. Enabled faculty to incorporate no-code AI solutions and data analytics into interdisciplinary curricula.
2. Provided skills to lead impactful, hands-on, capstone projects aligned with industry requirements.
3. Strengthened the university's commitment to SDG 4 and SDG 9 by building capacity for innovative, industry-relevant education.



EXPERT LECTURE

EVENT TITLE: “REAL-WORLD RELEVANCE OF COMPILER CONCEPTS IN INDUSTRY”

The two-day intensive session immersed students, research scholars, and faculty in practical AI model development using high-performance computing resources.

Date: 24th April 2025
Mode: Online (Microsoft Teams)

Key Highlights
Objective:

- Provide insights into how compiler concepts are utilized in real-world software development environments.
- Expose students to practical use cases involving compiler design, code optimization, and parsing techniques.

SDG Mapping (where relevant):

- SDG 4 (Quality Education): Promoting hands-on, application-based learning for technical skill development.
- SDG 9 (Industry, Innovation, and Infrastructure): Connecting academic learning to advanced industrial practices.

Event Segments (2 hours total):

- Discussed core compiler components such as lexical analysis, syntax trees, intermediate code generation, and optimization.
- Showcased real-world implementations, including intermediate representations and compiler engines used in cloud environments like Salesforce's Apex.
- Highlighted career pathways for students interested in compiler engineering, and the relevance of compiler theory in contemporary software tools.
- Concluded with a dynamic Q&A session where students clarified their queries and gained career guidance.

BENEFICIARIES:

- B.Tech IT undergraduates, particularly those studying Compiler Design.
- Faculty members and research scholars with interests in programming language design and compilers.

SPEAKER:

Mr. Chandra Prakash

· Senior Software Engineer, IT Services (Salesforce)
·Active tech speaker and community contributor with over 1,000 professional connections.
·Expertise: Compiler design, parsing, code optimization.

IMPACT:

- Enhanced student confidence in applying compiler concepts to real-world projects.
- Encouraged faculty to strengthen industry-oriented curriculum in compiler design.
- Directly supported SDG 4 (Quality Education) by linking theoretical learning to industrial relevance.

INTERNSHIP

Student Engagement and Achievement Overview

- The Information Technology department has achieved remarkable success in securing internship placements for the January May 2025 academic session, with 189 students successfully obtaining positions across diverse industries and organizations. This achievement represents a significant milestone in our department's commitment to bridging academic excellence with industry readiness. The internship placements were secured in two distinct phases, with 73 students in the initial phase and 116 students in the subsequent phase, demonstrating a progressive increase in both student participation and industry acceptance of our graduates.

Industry Partnerships and Compensation Structure

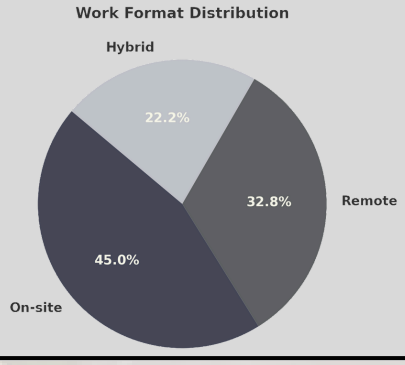
- Our students have secured internships across multiple engagement models, including on site, remote, and hybrid formats, ensuring flexibility while maintaining the quality of hands on experience. The financial aspects of these internships reflect the market value of our students' skills, with stipends ranging from INR 10,000 to INR 25,000 per month. Many positions also offer performance based compensation structures, while several students have opted for unpaid experiential learning opportunities in exchange for exposure to cutting edge technologies and methodologies.

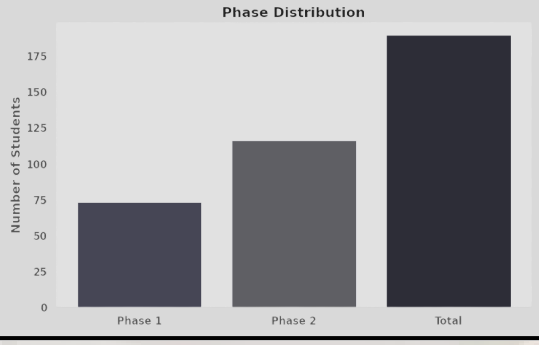
Prestigious Industry Placements

- The caliber of organizations that have welcomed our students speaks volumes about the quality of education and training provided by our department. Amazon, KPMG, Dell Technologies, Cognizant, Innominds, National Informatics Centre (NIC), DRDO, Maruti Suzuki, Secure Meters Limited, and Siemens represent just a selection of the prestigious companies that have recognized the potential of our students. These organizations span diverse domains including cloud computing, cybersecurity, artificial intelligence, machine learning, automotive systems, defense research, and enterprise software development, providing our students with exposure to the latest technological trends and industry practices.

Global Opportunities and Future Prospects

- The international dimension of our internship program has been exemplified by exceptional achievements such as Manya Bhutada's selection for a semester long exchange program in France under the CESI France initiative, combining academic study with paid internship experience. Neel Tomar has secured a remote internship with Venus Tech LLC, based in the United States, working on cutting edge technological solutions. These global placements underscore our students' competitiveness in the international job market and their adaptability to diverse cultural and professional environments. A significant number of these internships also carry the potential for Pre Placement Offers (PPOs), providing our students with a strategic advantage in securing full time employment upon graduation and reinforcing the strong industry partnerships that continue to drive our department's success.





PLACEMENT

Placement Achievement Overview

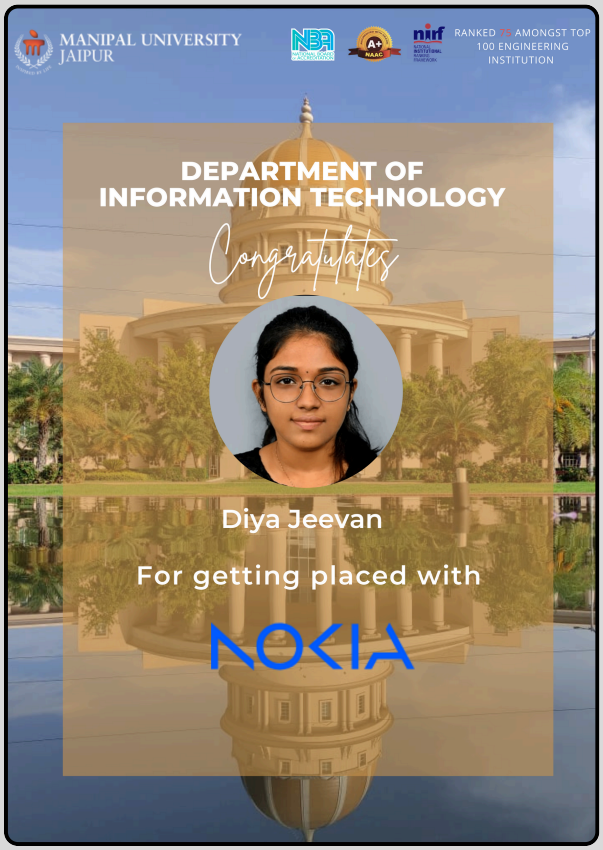
- The Information Technology department achieved outstanding results in the April–June 2025 placement cycle, with 10 students securing full-time positions at leading multinational corporations. The placements were equally distributed with 5 students each from the IT 2025 and IT 2026 batches, demonstrating consistent program quality across cohorts.

Career Impact

- These placements provide immediate employment opportunities and serve as foundations for long-term career growth in consulting, software development, telecommunications, and financial technology, reinforcing our commitment to producing industry-ready graduates.

- *For the **IT 2026 batch (Apr–June)**, **Lakshya Pawar** (Reg. No. 229302177) secured an internship at **Deloitte**, while Krish Sharma (229302399) joined Emerson. At **Nokia**, Diya Jeevan (229302269), Astha Agrawal (229302507), and Mannan Arora (229302209) completed their internships.*

- *For the **IT 2025 batch (Apr–June)**, Ayush Gupta (219302175), Pranshu Maheshwari (219302324), and Saras Mehta (219302122) interned at **Fidelity**, while Shreya Singh (219302189) and Jairam Subhash (219302484) joined **Infosys**.*



TEAM IT

As we wrap up the second quarter of the year, it's inspiring to reflect on the remarkable achievements, vibrant events, and collaborative spirit that defined the past three months. From academic excellence and innovative projects to cultural celebrations and community engagement, each milestone showcases the dedication and enthusiasm of our students, faculty, and staff. Let's carry this momentum forward, embracing new challenges and opportunities with the same passion and purpose. Here's to a productive and impactful year ahead!