

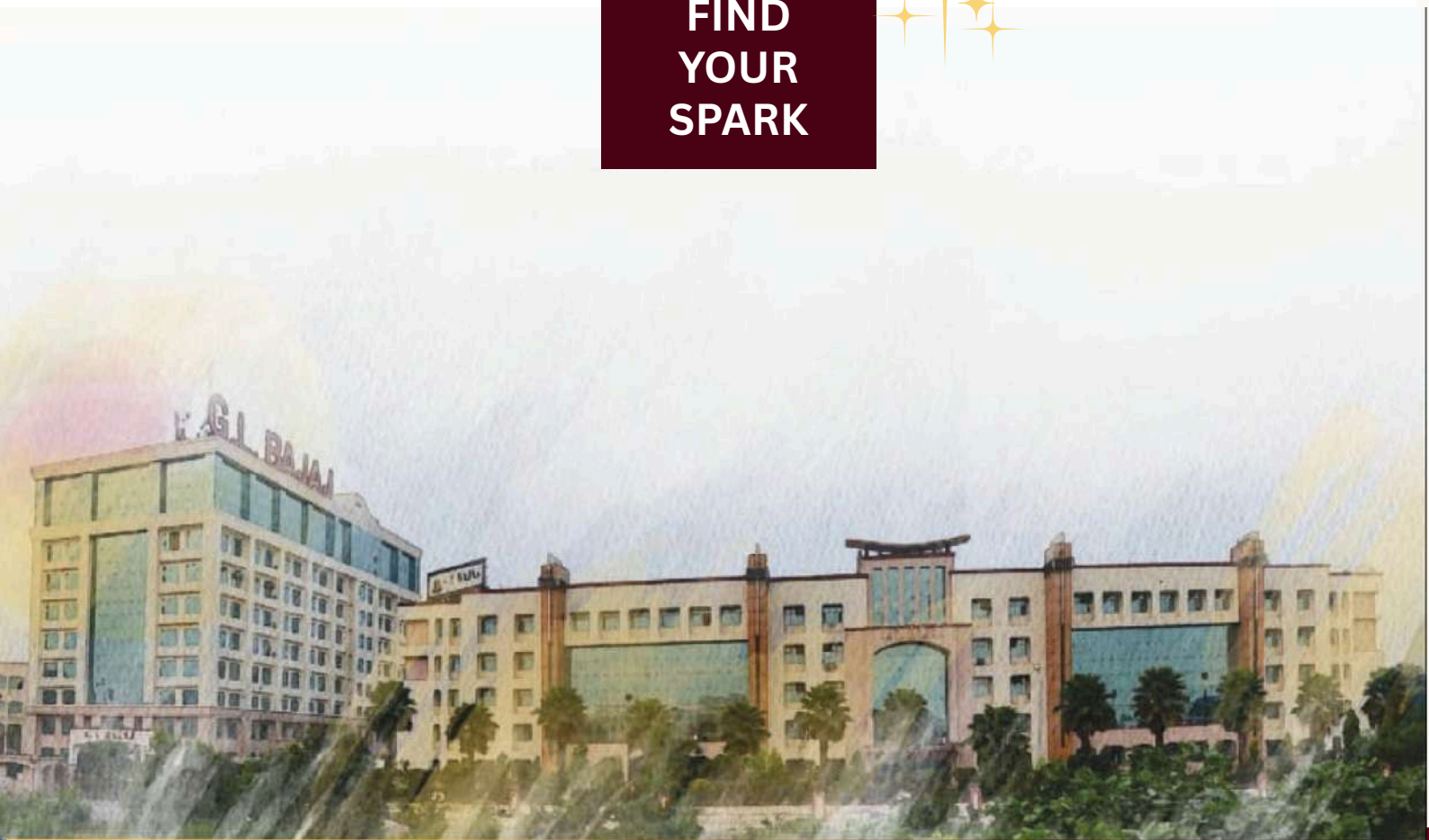
JULY  
2025  
ISSUE

# THE NEWSLETTER

DEPARTMENT OF CSE

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# About: The legacy behind Excellence

## **GL Bajaj Institute of Technology and Management: A Premier Institution in North India**

GL Bajaj Institute of Technology and Management, Greater Noida, is one of the leading self-financed educational institutions in the Delhi-NCR region. Established under the esteemed Rajeev Memorial Academic Welfare Society (Registered under the Societies Registration Act, 1860), the institute is approved by the All India Council for Technical Education (AICTE), Ministry of Education, Government of India, and is affiliated with Dr. A.P.J. Abdul Kalam Technical University (AKTU), Lucknow.

GL Bajaj stands out not only for its academic rigor but also for its commitment to nurturing well-rounded individuals equipped with the skills and values required for a successful future. The institute consistently maintains one of the highest pass percentages among engineering and management colleges affiliated with AKTU in the Noida and Greater Noida region.

Over the past eight years, GL Bajaj has secured a distinguished position in AKTU university results and is widely recognized among the top institutions in North India.





# Institutional & Departmental Ethos

## Vision of the Institute

To be an institute of repute, providing globally competent and socially sensitive professionals

## Mission of the Institute

- To equip with the latest technologies to be globally competitive professionals.
- To inculcate qualities of leadership, professionalism, corporate understanding and executive competence.
- To imbibe and enhance human values, ethics and morals in our students.

## Department Vision

M1 : Developing a strong mathematical & computing skill set among the students.

M2 : Extending the role of computer science and engineering in diverse areas like Internet of Things (IoT), Artificial Intelligence & Machine Learning and Data Analytics.

M3 : Imbibing the students with a deep understanding of professional ethics and high integrity to serve the Nation.

M4 : Providing an environment to the students for their growth both as individuals and as globally competent Computer Science professionals with encouragement for innovation & start-up culture.

## Program Educational Objectives (PEOs)

PEO 1 : Graduate will work in the area of Application Software Development, Artificial Intelligence & Machine Learning, Data Analytics, and Internet of Things.

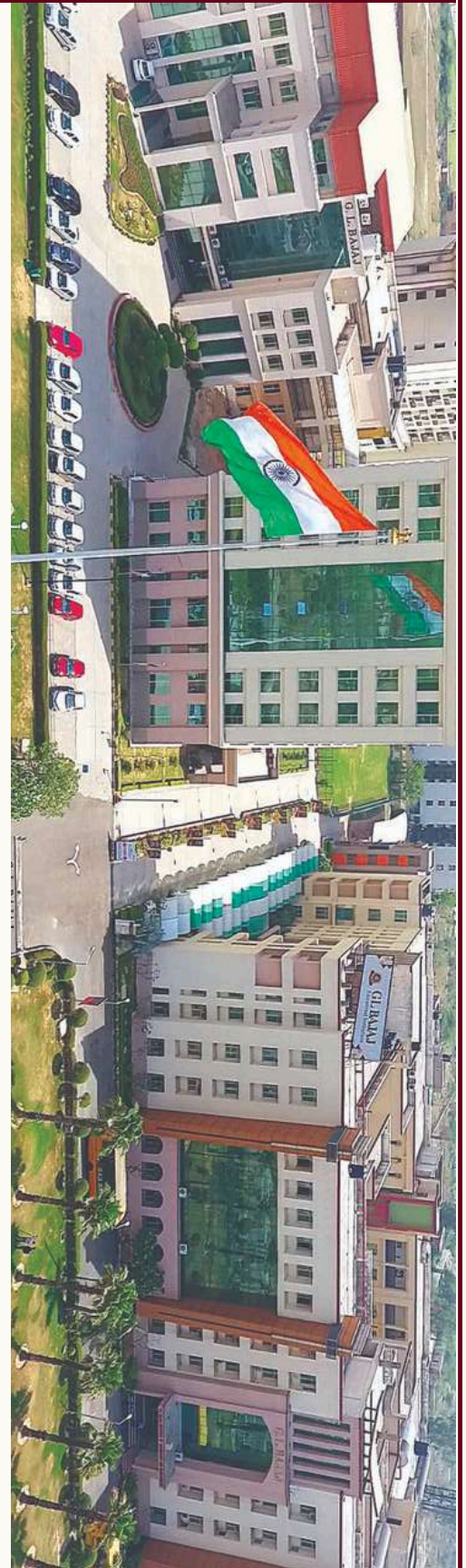
PEO 2 : Graduates will become successful software professionals with leadership and managerial quality in the modern software industry based on their strong skills on theoretical and practical foundation.

PEO 3 : Graduate will exhibit professional ethics and moral value with capability of working as an individual and as a team to contribute towards the need of industry and society

## Program Specific Outcomes (PSOs)

PSO1 : Students will be able to use problem solving skills to develop efficient algorithmic solutions.

PSO2 : Students will be able to develop solutions for a given problem in the area of artificial intelligence, data analytics, Computer Vision and IOT through a conducive environment and infrastructure.





# VISIONARY VOICE

## Message from the Director



**Dr. Preeti Bajaj**  
**Director, GLBITM**

*“The goal of education is the advancement of knowledge and the dissemination of truth.”*



Dear Students, Faculty, and Well-Wishers, Welcome to GL Bajaj Institute of Technology and Management – where academic excellence meets holistic development. We are committed to shaping future technocrats and leaders through quality education, character building, and innovative thinking.

With state-of-the-art infrastructure, dedicated faculty, and a focus on both curriculum and co-curricular activities, GL Bajaj provides an ideal environment for learning and growth. Our efforts are geared toward creating professionals who are confident, competent, and ready for the global stage.

We continually evolve with emerging trends in technology and education, ensuring our students remain ahead of the curve. Regular seminars, workshops, and faculty development programs help us maintain a dynamic academic ecosystem.

Join us in our journey toward knowledge, innovation, and excellence.

Warm regards,  
**Dr. Preeti Bajaj**  
**Director, GLBITM**



## From the Desk of the HOD – Computer Science

### Warm greetings to all of you!

It gives me immense pleasure to present this edition of the Department of Computer Science & Engineering's newsletter. This platform not only celebrates the accomplishments of our department but also serves as a bridge that connects us all—students, faculty, alumni, and stakeholders—with a shared sense of pride and progress.

In today's fast-paced, technology-driven world, where the boundaries between nations and disciplines are dissolving rapidly, it becomes essential to stay ahead with knowledge, skill, and adaptability. With globalization and competition shaping our future, our department strives to keep pace with emerging trends in technology, science, and education.

Let us continue this journey together with curiosity in our minds and courage in our hearts.

Warm regards,

**Dr. Sansar Singh Chauhan**  
Head of the Department  
Computer Science & Engineering



**Dr. Sansar Singh Chauhan**  
Head of the Department  
Computer Science &  
Engineering





# Editorial Crew

## Message from the Editorial Board Coordinator

It gives me immense pleasure to present the July 2025 Issue of the CSE Department Newsletter. This newsletter serves as a platform to highlight the academic achievements, innovative initiatives, research contributions, and vibrant activities of our department.

With each edition, we aim to capture the spirit of progress and showcase the dedication of our faculty, students, and staff.

Their expertise and enthusiasm will strengthen our commitment to providing quality education, fostering innovation, and preparing our students for future challenges.

I extend my sincere gratitude to all contributors, editors, and coordinators who have worked diligently to bring this newsletter to life. I also encourage students and faculty to actively participate in future editions by sharing their achievements, ideas, and creative inputs.

Together, let us continue to build a culture of learning, innovation, and excellence.

**Mr. Shikhar Pandey**

**Editorial Board Coordinator**

**Department of Computer Science & Engineering**

**GL Bajaj Institute of Technology and Management**





# Editorial Crew

## CONTENT WRITING TEAM



**NAINSI MOTIYAN**



**SHUBHANJALI**



**PRIYA GOEL**

## DESIGNING & FORMATTING TEAM



**REHAN SHAMIM**



**SHAMBHAVI SINGH**



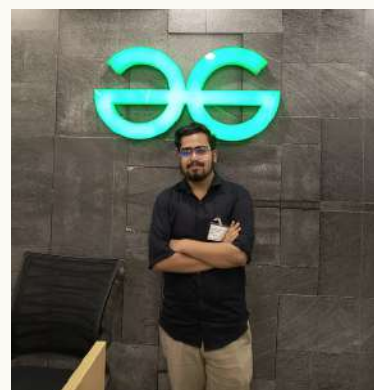
**PRATHAM SINGH**

## CREATIVE SECTION



**MAHEK SINGHAL**

## MENTOR



**DIVYANK BATHAM**



# Student Achievement

## -> Hackathon Achievement

### CSE Students Win Thales AcadxHackathon with AI-Based Code Deobfuscation Solution

We are delighted to announce that a team of talented students from the Department of Computer Science & Engineering has brought laurels to the college by winning the AcadxHackathon organized by Thales, securing the Winner's position along with a cash prize of ₹50,000.

The winning team comprised:

- Surya Dev Singh
- Manya Johri
- Suryansh Singh
- Preeti Rani

The hackathon witnessed participation from several reputed institutions, where students competed on challenging real-world problem statements. Our team chose the problem statement "AI for Code Deobfuscation", which required them to develop innovative AI-based solutions capable of simplifying and analyzing complex, obfuscated code. Through sheer determination, teamwork, and technical expertise, the team designed a unique approach that impressed the jury and stood out among all competing solutions. Their success reflects not only their hard work but also the strong mentorship and learning culture fostered within the CSE Department.



## -> Placement Highlight

### From CSE to the Corporate World!”

#### **CSE Student Tanish Nagar secures ₹33 LPA package at VISA**

The Department of Computer Science & Engineering is delighted to announce the outstanding placement achievement of Mr. Tanish Nagar, who has secured a prestigious offer with VISA at a remarkable CTC of ₹33 Lakhs per annum. Tanish’s success is a reflection of his unwavering dedication, technical skills, and problem-solving abilities developed during his journey with the department. It also underscores the department’s commitment to nurturing talent and preparing students for global opportunities in leading technology companies. This proud moment adds yet another feather in the cap of the CSE Department, motivating students to dream big and work hard towards achieving excellence. We congratulate Tanish Nagar for his remarkable accomplishment and wish him success in his future endeavors.





# Faculty Achievement

## Global Recognition

### Dr. Shashank Awasthi appreciated by IEEE President, USA

GL Bajaj Institute of Technology and Management proudly hosted the 3rd IEEE International Conference on Disruptive Technologies (ICDT-2025), bringing together innovators, researchers, and industry leaders to explore the future of disruptive tec “Global Recognition for Excellence”

Dr. Shashank Awasthi honoured by IEEE President, USA

It is a matter of immense pride for the Department of Computer Science & Engineering that Dr. Shashank Awasthi has been honoured with special appreciation from the IEEE President, USA during the IEEE India Council Golden Jubilee Celebration held on 23rd July. This recognition highlights not only Dr. Awasthi’s dedication to research, teaching, and professional excellence but also reflects the growing contributions of our department at a global platform. Such acknowledgments motivate the entire CSE fraternity to strive for higher goals in innovation, leadership, and knowledge dissemination.



# Faculty Publications

## CSE Department Applauds Faculty for Remarkable Research Publications

The Department of Computer Science & Engineering proudly congratulates its faculty members for their outstanding research contributions published in reputed journals and book chapters this month.

### Dr. Arun Kumar Achieves Dual Research Milestone in AI and Deep Learning Applications

The Department of Computer Science & Engineering proudly acknowledges Dr. Arun Kumar for his remarkable contributions to research in cutting-edge technologies.

#### **Book Chapter (Scopus Indexed):**

“Investigating GPU-Accelerated Deep Learning Architectures for Water Level Prediction Models”

This chapter explores the use of GPU-optimized deep learning techniques to improve predictive accuracy and computational efficiency in water level forecasting, contributing to better disaster management and environmental monitoring.

Journal Publication:

#### **“LungNet: A Transformer-Based Deep Learning Model for Early Lung Cancer Detection from CT Images”**

Published in the Revista Latinoamericana de la Papa – International Journal, this research introduces an advanced transformer-based AI model that significantly enhances early lung cancer detection through CT imaging, supporting timely diagnosis and effective treatment planning.



**Dr. Arun Kumar**

**Paper Title: LungNet: A Transformer-Based Deep Learning Model for Early Lung Cancer Detection from CT Images**  
**Journal: Revista Latinoamericana de la Papa – International Journal**

## **Mr. Praveen Kumar Rai Publishes Innovative Research AI-Powered Monkeypox Detection**

The Department of Computer Science & Engineering proudly congratulates Mr. Praveen Kumar Rai for his significant research contribution in the field of medical image analysis using artificial intelligence.

### **Journal Publication:**

#### **“An Adaptive Generative 3D VNet Model for Enhanced Monkeypox Lesion Classification Using Deep Learning and Augmented Image Fusion”**

Published in the Journal of Imaging Informatics in Medicine – International Journal, this research introduces an advanced adaptive generative 3D VNet architecture designed to improve the accuracy of Monkeypox lesion classification. The study leverages deep learning techniques combined with augmented image fusion to address challenges such as data imbalance, complex lesion structures, and limited medical imaging datasets. The proposed model demonstrates superior performance compared to traditional methods, offering enhanced precision in detecting and classifying Monkeypox lesions. This breakthrough contributes to faster, more reliable diagnosis, aiding healthcare professionals in timely treatment and disease management. This achievement underscores the department’s dedication to fostering impactful research in AI-driven healthcare solutions and advanced medical imaging technologies.



**Mr. Praveen Kumar Rai**  
**Paper Title: An Adaptive Generative 3D VNet Model for Enhanced Monkeypox Lesion Classification Using Deep Learning and Augmented Image Fusion**  
**Journal: Journal of Imaging Informatics in Medicine – International Journal**

## **Ms. Vineeta Publishes Research on Real-Time Image Fusion Using Nature-Inspired Optimization**

The Department of Computer Science & Engineering proudly congratulates Ms. Vineeta for her outstanding research contribution in the field of image processing and optimization techniques.

### **Journal Publication:**

#### **“Real-Time Image Fusion Using Nature-Inspired Optimization Techniques”**

Published in the International Journal of Environmental Sciences – International Journal, this research focuses on developing a real-time image fusion framework that leverages nature-inspired optimization algorithms, such as Genetic Algorithms and Particle Swarm Optimization. The proposed method efficiently integrates multiple image sources to produce high-quality fused images with enhanced visual clarity and feature preservation.

The study addresses key challenges in image fusion, including real-time processing, robustness, and accuracy, making it highly relevant for applications in remote sensing, environmental monitoring, surveillance, and medical imaging.

This accomplishment reflects Ms. Vineeta's commitment to advancing innovative computational solutions, contributing significantly to the domains of image processing and optimization-based AI techniques.



**Ms. Vineeta**

**Paper Title: Real-Time Image Fusion Using Nature-Inspired Optimization Techniques**

**Journal: International Journal of Environmental Sciences – International Journal**

# ICAAAIML-2025 – Inaugural Ceremony

## “Global Minds Unite at Sharda University”

### ICAAAIML-2025 inspires collaboration and innovation in AI & ML

The 5th International Conference on Advances and Applications of Artificial Intelligence and Machine Learning (ICAAAIML-2025) was inaugurated on 18th July 2025 at Sharda University, Greater Noida. The prestigious event marked another milestone in advancing research and global dialogue in AI and ML.

We were honoured to have Dr. Sansar Singh Chauhan, Head of the Department of Computer Science & Engineering, as the Distinguished Guest for the Inaugural Ceremony.

In his thought-provoking address, Dr. Chauhan emphasized the role of Artificial Intelligence and Machine Learning in shaping not only the future of technology but also in transforming society and industry. His inspiring words motivated participants to explore new horizons in research and innovation.

The two-day conference witnessed active participation from academicians, researchers, and industry experts from India and abroad. With insightful keynote talks, technical sessions, and panel discussions, ICAAIML-2025 provided an exceptional platform for knowledge exchange, collaboration, and exploration of cutting-edge ideas.

The conference concluded with renewed energy and a collective vision to foster interdisciplinary research and international cooperation, reaffirming the pivotal role of AI and ML in driving future technologies.



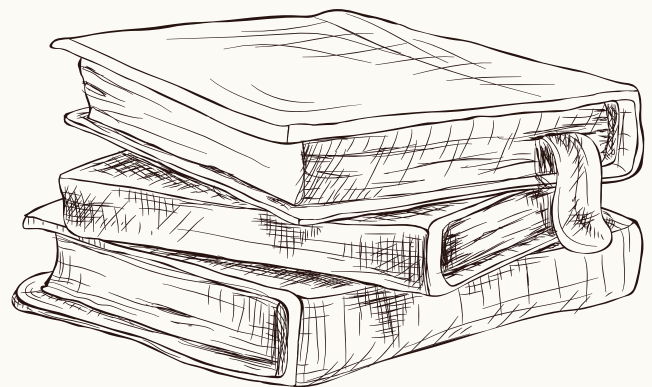


# Glimpses of the month (July) 2025

## KNOWLEDGE TRANSFER SESSION DR. PANKAJ KUMAR

Dr. Pankaj Kumar from the department of Computer Science & Engineering delivered a Knowledge Transfer (KT) session titled “Hand Motion Sign Language Detection Using Convolutional Neural Network (CNN) and YOLOv5 Object Detection Framework”.

The Session focuses on developing a real-time sign language detection model to enhance communication for individuals with hearing disabilities. Sign language, combining hand gestures, facial expressions, and body movements, serves as a vital tool for those with hearing challenges. The proposed system utilizes webcams or built-in device cameras to capture and recognize hand gestures using machine learning algorithms trained on labeled sign language datasets. The model has shown high accuracy under well-lit and controlled conditions and allows users to customize gestures to meet their individual needs. However, the system currently faces challenges in low-light environments and unpredictable backgrounds, which impact its accuracy. Future improvements include expanding the gesture dataset with varied poses and viewpoints to strengthen the algorithm's learning capacity and robustness. Ongoing exploration of advanced machine learning techniques aims to enhance the system's adaptability to real-world environmental variations. Ultimately, this research aspires to create a reliable and inclusive communication tool that bridges the gap between sign language users and the broader community.



# KNOWLEDGE TRANSFER SESSION

## DR. Vrinda Sachdeva

Enhancing Early Cancer Detection:

Dr. Vrinda Sachdeva's Expert KT on CT Scan Techniques

Dr. Vrinda Sachdeva from the Department of Computer Science and Engineering delivered a Knowledge Transfer (KT) session on “Advanced Techniques for Early Prediction from CT Scans,” focusing on the importance of medical image preprocessing in enhancing diagnostic accuracy, particularly for lung cancer. Dr. Sachdeva introduced various challenges associated with early-stage detection of cancer and emphasized the significance of image quality improvement through advanced preprocessing methods. During the session, she explained the **complete pipeline of preprocessing techniques applied to CT scan images, including image acquisition, resizing, filtering, edge detection, enhancement, and cropping.** Using Python and OpenCV as primary tools, Dr. Sachdeva demonstrated how filters such as bilateral, median, and Gaussian, along with edge detection operators like Canny and Sobel, can significantly improve image clarity. The benefits of these techniques were evaluated using **PSNR (Peak Signal-to-Noise Ratio) values, identifying bilateral filtering, Canny edge detection, and the filter2D function as the most effective methods.**



# KNOWLEDGE TRANSFER SESSION

## DR. PAYAL GARG

### Decoding Movie Sentiments: Dr. Payal Garg's ML & NLP Insights

Dr. Payal Garg from the Department of Computer Science & Engineering delivered a Knowledge Transfer (KT) session on “**Sentiment Analysis of Movie Reviews using Machine Learning,**” highlighting the role of NLP and ML in classifying sentiments. During the session, she explained traditional lexicon-based approaches like Bag of Words and TF-IDF for feature extraction. She further discussed the application of **deep learning models, focusing on BERT neural networks for accurate classification.**

Dr. Payal compared various models on the IMDb 50K dataset, detailing their accuracies, precision, recall, and F1 scores. **The session emphasised that the DistilBERT model achieved the highest accuracy of 94.15%, outperforming traditional ML classifiers.** The session also covered performance evaluation metrics and loss curves for the models. It encouraged interactive discussion on practical applications of sentiment analysis in recommendation systems and film analytics.

Overall, the session was **informative, engaging, and provided deeper technical insights into machine learning-based sentiment analysis in NLP.**



# KNOWLEDGE TRANSFER SESSION

## DR. ARUN KUMAR

Tune Into Emotions:

### Dr. Arun Kumar's Smart Music Recommendation KT

Dr. Arun Kumar from the Department of Computer Science & Engineering conducted a Knowledge Transfer (KT) Session on the topic “Implementation of Emotion-Based Multifaceted Recommendation System.” During the session, he explained an intelligent recommendation system that detects a user's emotional state by analyzing facial expressions and hand gestures. Based on the identified mood, the system generates a personalized playlist of songs, further refined by the user's preferred singer and language of choice. The session offered **technical insights into how real-time emotion recognition is achieved from live video frames or static images**. The system utilizes previously collected data from various research studies to accurately classify emotional states. While the system is already functional and performs well in **real-time conditions**, **Dr. Kumar acknowledged that there is still significant potential for enhancement and further optimization**.



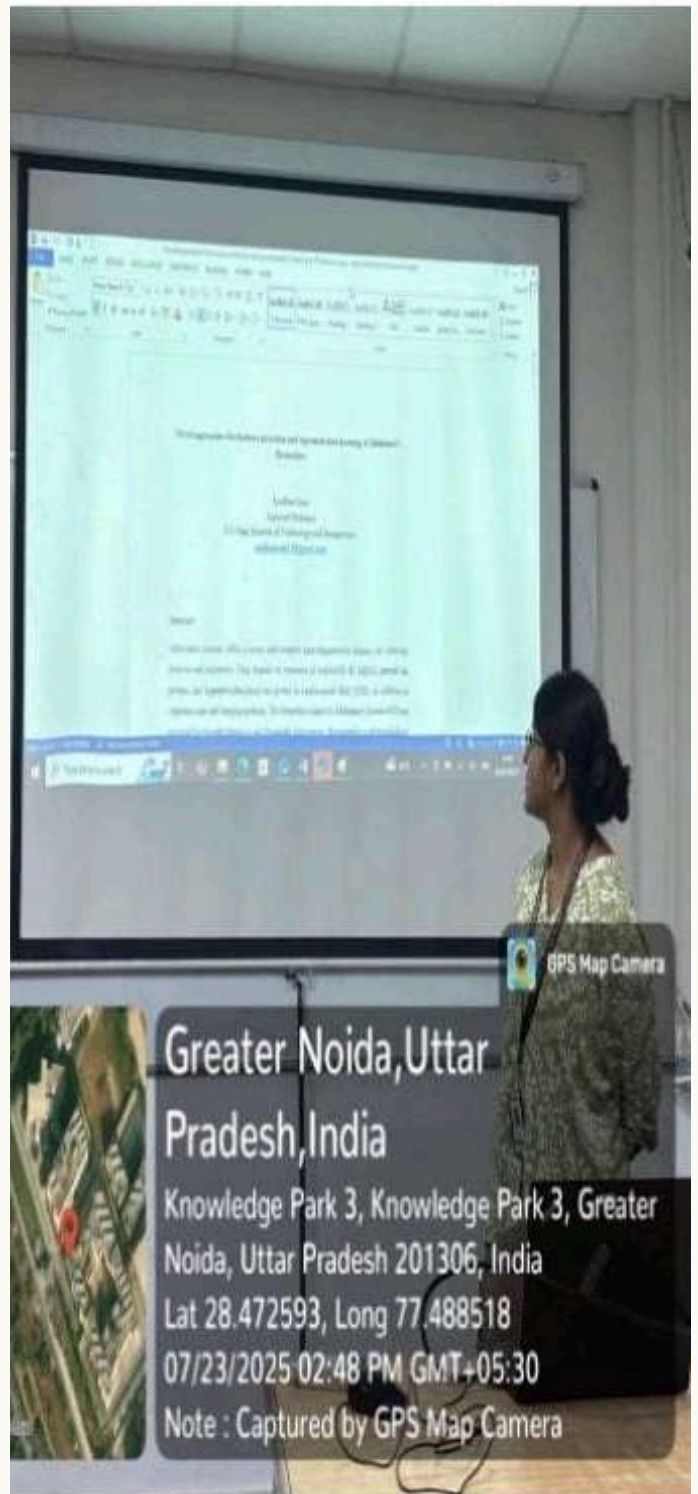
# KNOWLEDGE TRANSFER SESSION

## Ms. ARADHANA SAINI

### Cracking Alzheimer's Code:

### Ms. Aradhna Saini's Insightful KT on Biomarker Detection

Ms. Aradhna Saini from the Department of Computer Science & Engineering conducted a Knowledge Transfer (KT) Session on the topic “Novel approaches for feature extraction and representation learning of Alzheimer’s Biomarker.” During the session, she explained an intelligent recommendation system that detects a user's emotional state by analyzing facial expressions and hand gestures. Based on the identified mood, the system generates a personalized playlist of songs, further refined by the user's preferred singer and language of choice. The session offered technical insights into **how machine learning and neuroimaging techniques are being harnessed to identify early biomarkers of Alzheimer’s disease.** Using advanced algorithms such as **convolutional neural networks and ensemble learning models,** researchers have been able to **extract structural and functional brain patterns from MRI and PET scans.**



# KNOWLEDGE TRANSFER SESSION

## Ms. KIRAN SINGH

AI Meets Agriculture:

Ms. Kiran Singh's KT on Hybrid CNN-SVM for Rice Leaf Disease Detection

Ms. Kiran Singh from the Department of Computer Science Engineering delivered a Knowledge Transfer (KT) session on “Hybrid CNN-SVM Framework for Rice Leaf Disease Detection to Promote Sustainable Agriculture,” highlighting the role artificial intelligence (AI) in agriculture, specifically for early and accurate detection of rice leaf diseases using a hybrid CNN-SVM model. During the session, she explained The session aimed to **disseminate knowledge from the published research paper, focusing on the integration of Artificial Intelligence (AI) in agriculture.** Specifically, the paper highlights **the use of a hybrid Convolutional Neural Network (CNN) and Support Vector Machine (SVM) model for the early and accurate detection of rice leaf diseases, ultimately supporting sustainable farming practices.**





# Departmental Update – Minutes of Meeting (MoM)

## Department Meeting Research Policies and Strategic Targets

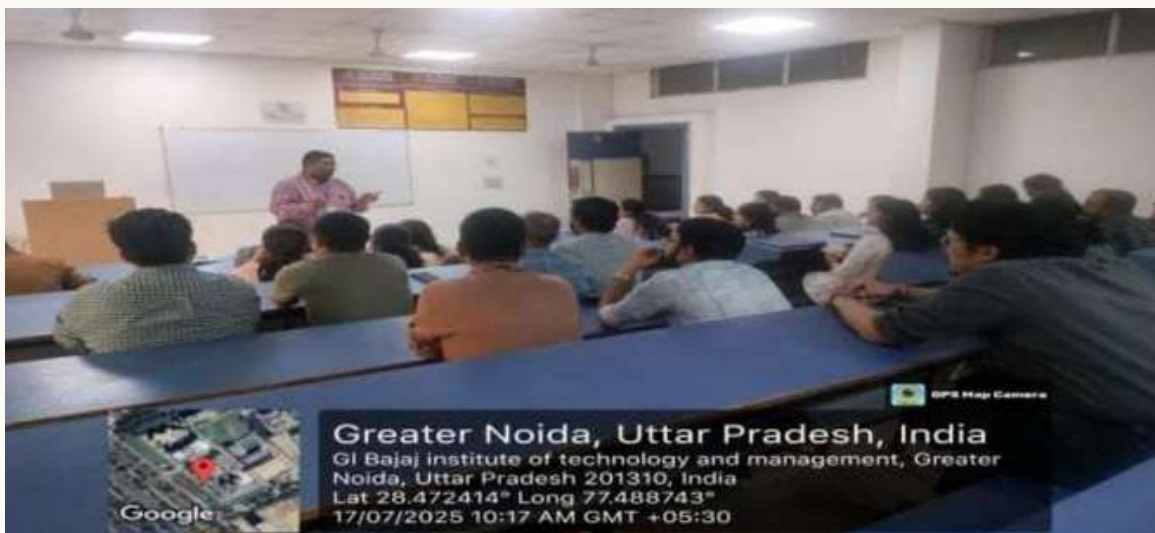
Convenor: Dean – Research & Development

Date: 17th July 2025 | Venue: Room No. 125

The Department of Computer Science & Engineering conducted a meeting under the guidance of the Dean – Research and Development to discuss policies and strategies for strengthening the research culture in the department.

Key Highlights & Decisions:

- Policy: Follow updated research guidelines on publication quality, ethics, and plagiarism checks. Detailed policy will be emailed.
- Claims: Submit incentives and patent reimbursements in the prescribed format with documents for timely processing.
- Targets:
  - Publish 1 Scopus-indexed paper this month.
  - Submit 1 research proposal for external funding.
  - Progress will be reviewed every semester.
- Support: For any research-related issues, contact Dean Research, HOD, or Research Coordinator.





## Departmental Update Welcoming New Faculties

### Welcoming Our New Faculty Members

The Department of Computer Science & Engineering at GL Bajaj Institute of Technology and Management is delighted to welcome our newly joined faculty members. Their expertise, innovative research areas, and commitment to student learning will further strengthen our academic excellence.



**Ms. Kajal Gupta**  
Assistant Professor  
Machine Learning,  
Deep Learning



**Mr. Kumar Nishant**  
Assistant Professor  
Adversarial Learning



**Mr. Abhishek Singh**  
Assistant Professor  
Software Engineering,  
Blockchain, and  
Software Design



**Ms. Amrita Singh**  
Assistant Professor  
C, C++, Python, Design  
and Analysis(DAA), Pega,  
Web Development,  
PowerBi, SQL, Excel

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# GL BAJAJ

Institute of Technology & Management

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Plot No. 2, Knowledge Park-III, Greater Noida - 201306

