COMPLUS NEWSLETTER

DEPARTMENT OF COMPUTER APPLICATIONS

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" Technology is best when it brings people together "

DEPARTMENT OF COMPUTER APPLICATIONS

About the Department

The Department of Computer Applications & School of CSE-II and Faculty of Science, Technology and architecture at Manipal University Jaipur (MUJ) strives for academic excellence with a cutting-edge curriculum. Since its inception in 2019, the department has reached significant heights, offering high-quality programs at both undergraduate and postgraduate levels. Currently, over 750 students are enrolled with 23 faculty members. The department prepares students to design, develop, and implement software applications, emphasiz- ing the latest programming languages and technologies. It aims to become a center of excellence, providing technical knowledge, innovation opportunities, and state-of-the-art facilities. The flexible curriculum is designed to let students explore their interests and is regularly updated with feedback from stakeholders. This foundation supports students in pursuing higher education in India and abroad.

Courses Offered

1. Bachelor of Computer Applications (BCA),
2. Specialization (Cybersecurity / Data Science)
3. BCA Honors (Software Product Engineering)
4. Master of Computer Applications (MCA)
5. Ph. D. (FoSTA)
6. MSC (Cyber Security) - A new course is going to be introduced in the department

Message from the Head of Computer Applications Department

I am pleased to express my heartfelt appreciation for the successful release of the Newsletter from the Department of Computer Applications. Your dedication and efforts in showcasing the diverse talents of our students, both academically and creatively, are truly commendable. The Newsletter serves as a reflection of the myriad activities undertaken by our Department, offering a clear picture of our achievements. Moreover, it will play a significant role in nurturing the creative writing skills of our students and faculty members through their technical articles, essays and poetry, thereby enhancing students' reading practices. I am confident that this issue of the Newsletter will positively impact all students and individuals interested in not only Computer Applications and IT but also in arts, literature, sciences and other areas. Your continuous efforts in producing this Newsletter annually deserve immense recognition. I extend my sincere appreciation to the Department of Computer Applications and all faculty members for their wonderful contributions in accomplishing this task. Additionally, I congratulate all the students for their fruitful efforts.

Dr. Shilpa Sharma Kulkarni
Associate Professor & Head,
Department of Computer
Applications
Manipal University Jaipur

MANIPAL UNIVERSITY JAIPUR

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Faculty Development Program (FDP's)

We are proud to announce the remarkable achievements of our esteemed faculty members of Department of Computer Applications from Manipal University Jaipur have successfully completed the NEP 2020 Orientation & Sensitization Programme under the Malaviya Mission Teacher Training Programme (MMTTP) organized by the University Grants Commission (UGC) and IGNOU. The program aimed to enhance teaching excellence and align pedagogical approaches with the National Education Policy (NEP) 2020.
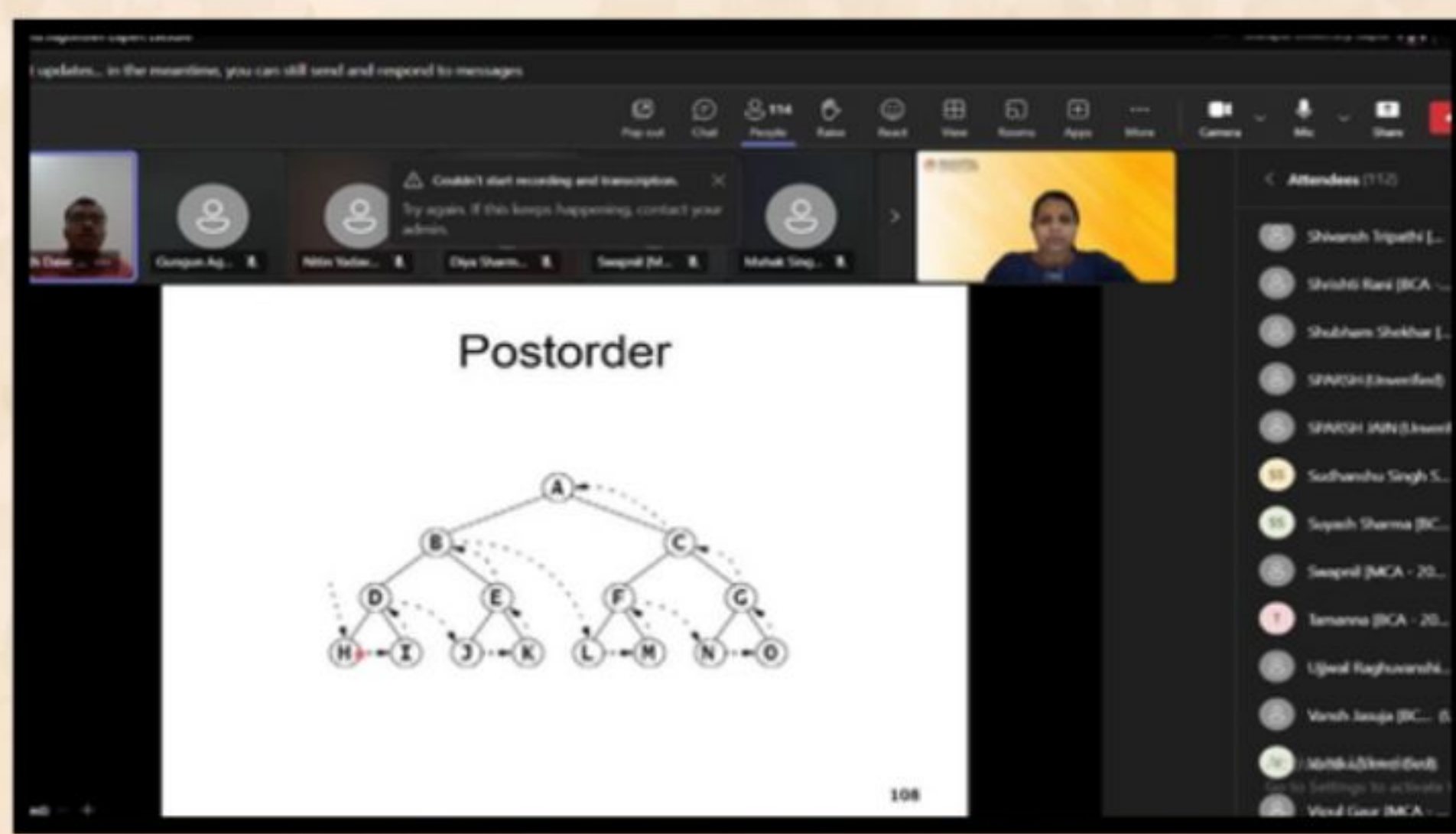
Their dedication and commitment to academic growth are truly commendable, as both secured an outstanding A+ grade in this prestigious program held from 15th to 24th January 2025.
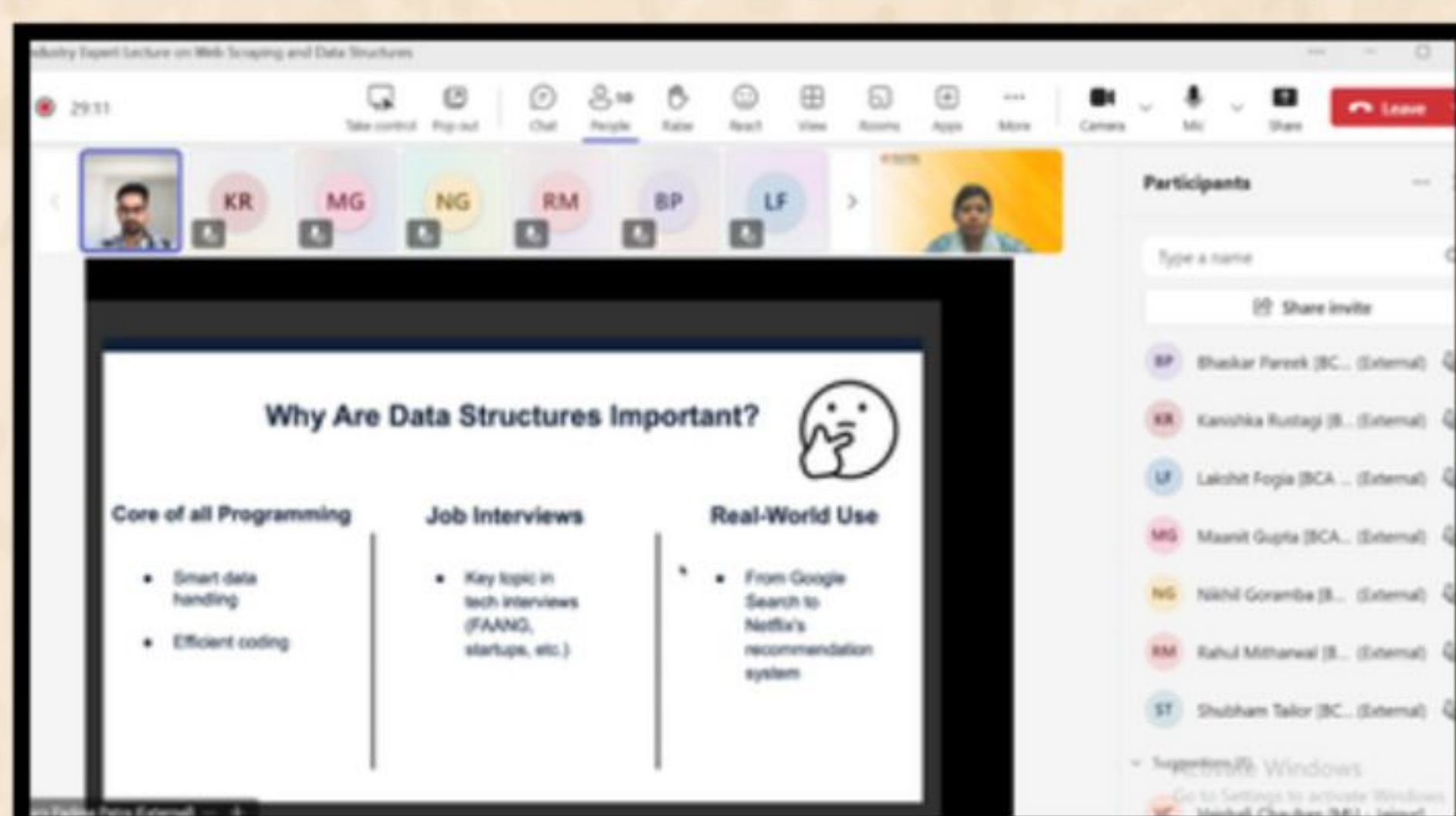
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Expert lectures

The Department of Computer Applications organized an insightful Industry Expert Talk on April 12, 2025. The session featured **Mr. Parth Dave**, an Associate Software Developer at MetaCubes, who shared his professional expertise on the topic of "Non-Linear Data Structure: Trees

The Department of Computer Applications organized an insightful Industry Expert Talk on May 3, 2025, to bridge academic concepts with practical industry applications. The session, titled "Learning Data Structures via Web Scraping," was led by **Mr. Suparn Padma Patra**, a Full Stack Developer at Class Centra

Expert lectures

On May 3, 2025, the Department of Computer Applications hosted an Industry Expert Talk titled "Problem to product: Solving Real issues with AI". The session featured guest speaker **Ms. Jagriti Jain,** an IT Project Manager at Niural, who provided valuable insights into the practical applications of Artificial Intelligence
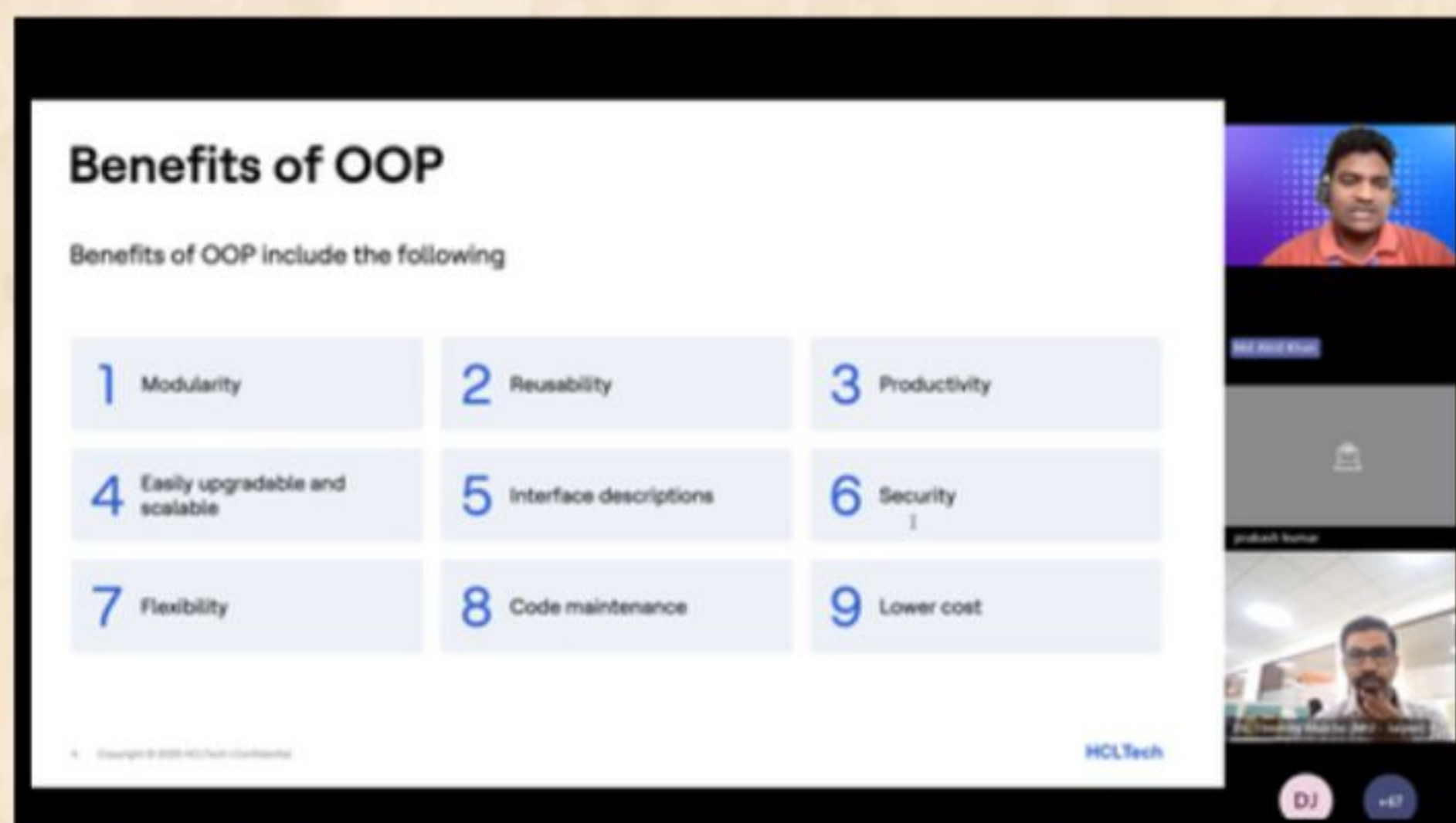

The Department of Computer Applications, MUJ, organized an expert talk on "Mobile Computing – Changing the World" by **Dr. Yash Pal Soni**, CIO, HG Infra Ltd., on 4th May 2025. The session highlighted real-time applications of mobile technologies in infrastructure, logistics, and project management, inspiring students toward innovation in mobile computing
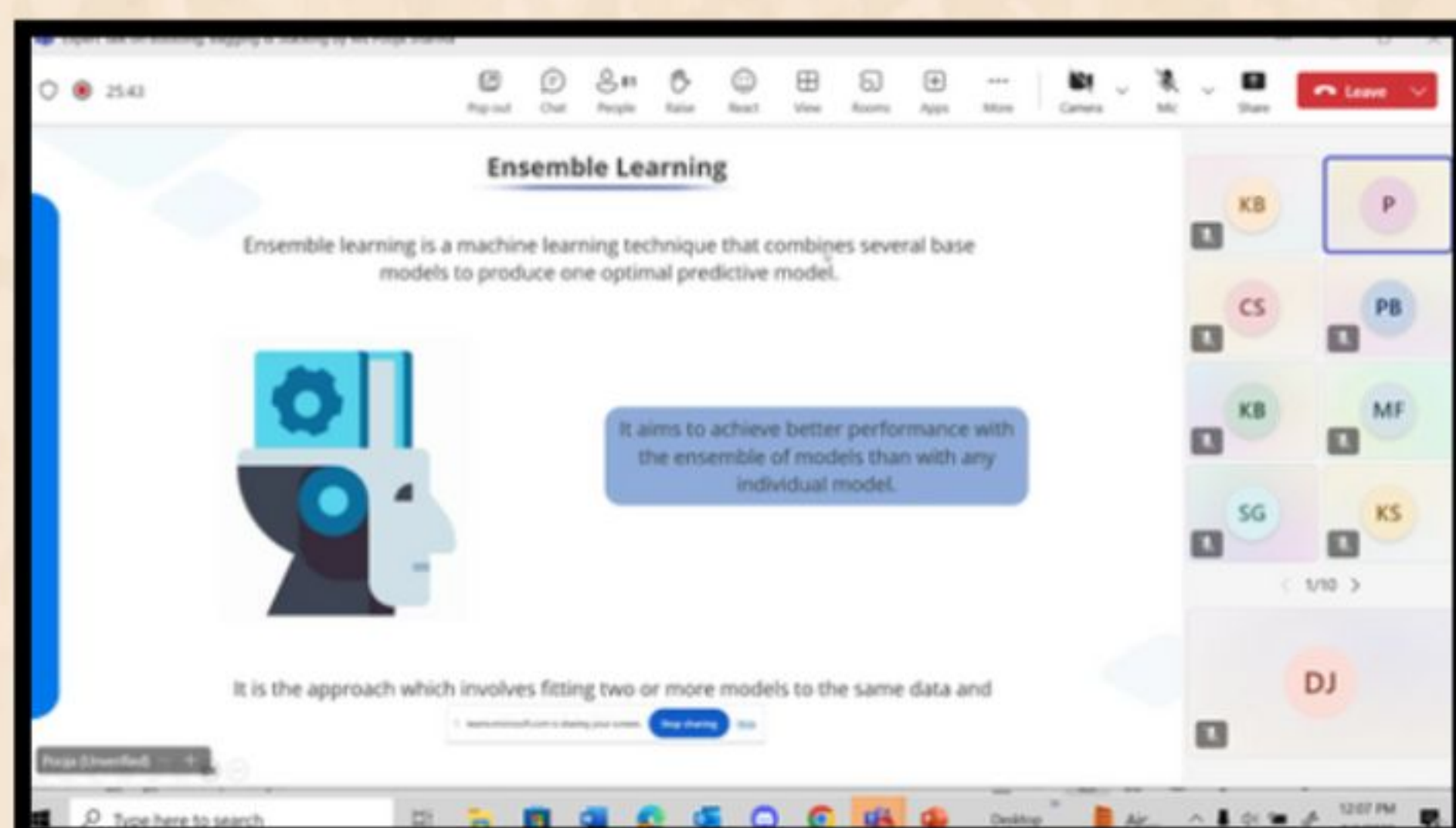
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Expert lectures

The Department of Computer Applications, MUJ, organized an expert talk on "Object-Oriented Programming Using C++" on April 10, 2025. Delivered by **Mr. Md. Abid Khan**, Technical Lead at HCLTech, the session enriched BCA II semester students with practical insights into OOP concepts, C++ applications, and real-world demonstrations.

The Department of Computer Applications, MUJ, organized an expert talk on "Boosting, Bagging & Stacking: Advanced Ensemble Learning for Real-World AI" on April 4, 2025. Delivered by **Ms. Pooja Sharma** from Simplilearn, the session provided students with deep insights into ensemble learning techniques and their applications in modern AI solutions
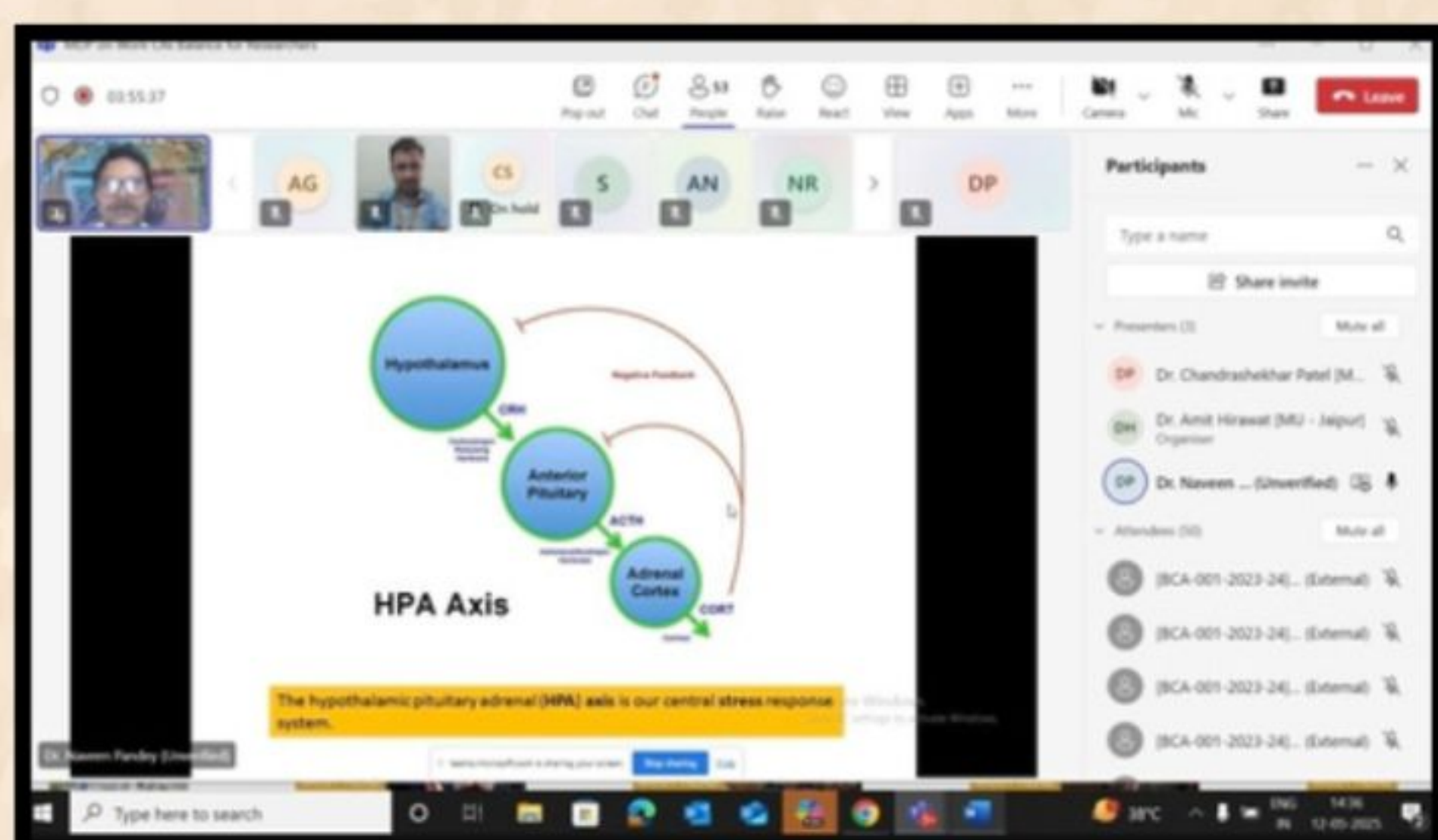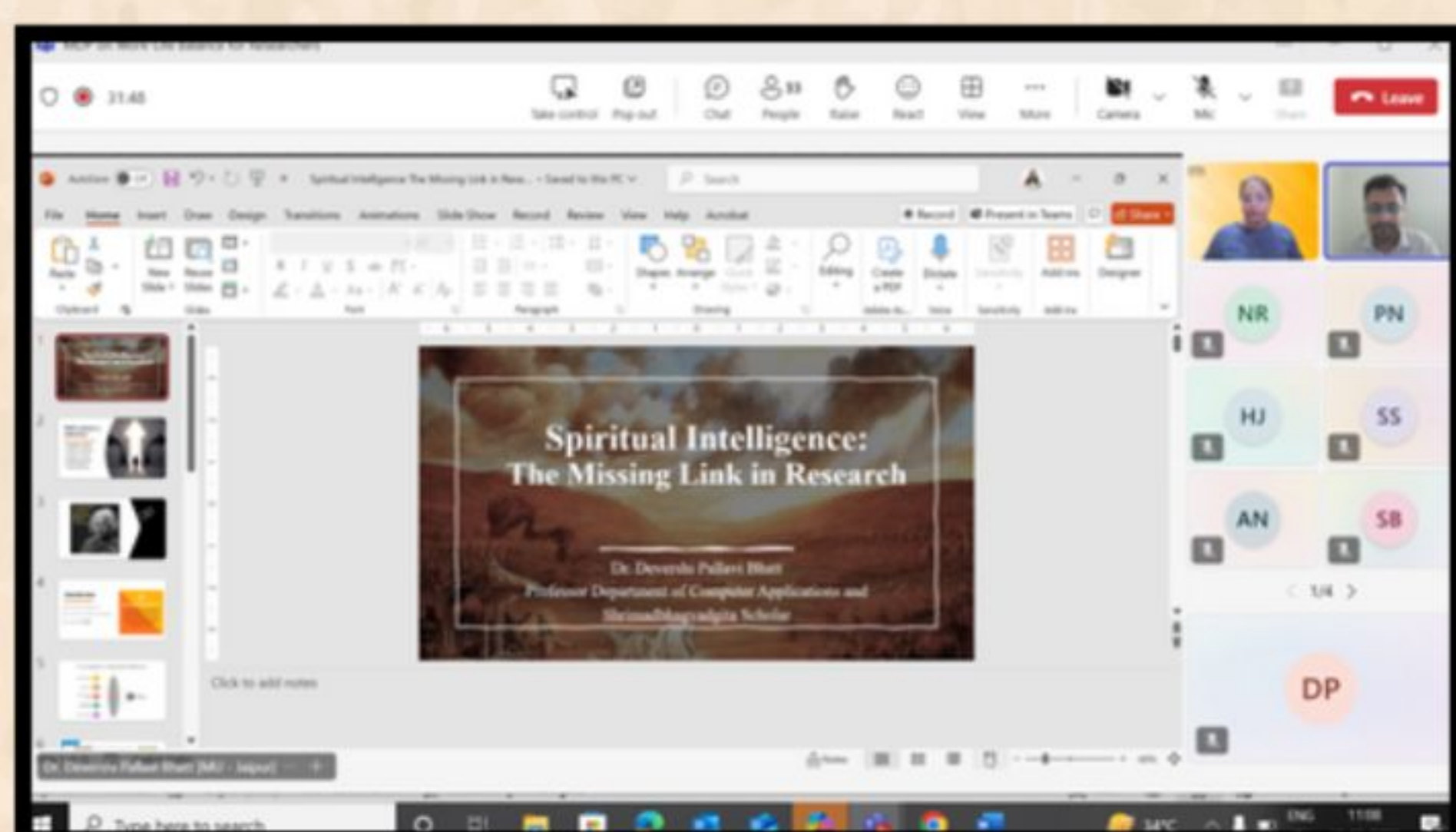
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Management Development Programme (MDP)

Work-Life Balance for Researchers

The Department of Computer Applications, MUJ, in collaboration with the HR Department, organized a 2-Day Management Development Programme on "Work-Life Balance for Researchers" (12–13 May 2025). Esteemed speakers included **Dr. Naveen Pandey**, HG Raghav Charan Das,who shared insights on stress management, productivity, and spiritual well-being

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Farewell'25

It's hard to say goodbye to such inspiring individuals who have guided us and set a remarkable example. Your dedication, wisdom, and camaraderie have left an indelible mark on our lives. As you step into new adventures, we wish you all the success and happiness that the world has to offer. May your future be as bright as the smiles you've brought to our faces. Remember, no matter where life takes you, you will always have a special place in our hearts. Farewell, and may your journey be filled with endless opportunities and joy. Batch- (2022-2025)

Capability Enhancement cum Domain Training Session

"Cyber-fraud Alert!Detect,Prevent,Protect"

On 3rd June 2025, the Department of Computer Applications, in collaboration with the HR Department of Manipal University Jaipur, organized a focused domain training session titled "Cyber-Fraud Alert! Detect, Prevent, Protect". Held in Lab 203, Academic Block 2, the offline session brought together 23 nominated faculty members and staff for an intensive learning experience on digital safety and fraud prevention.

The session was led by Mr. Amit Kumar Singh, Assistant Professor at Amity University Rajasthan, who shared expert insights into the evolving landscape of cybercrime. Participants explored real-world fraud scenarios, learned to identify red flags, and gained practical strategies to detect threats, prevent breaches, and respond effectively to incidents.

The training emphasized the importance of cyber awareness, proactive defense mechanisms, and reporting protocols—critical skills in today's increasingly digital academic environment. Interactive discussions and case-based learning made the session both informative and actionable.

Dr. Amit Hirawat, Assistant Professor, Department of Computer Applications, served as the convener, ensuring smooth coordination and impactful delivery.

This initiative reflects MUJ's commitment to equipping its faculty with the tools and knowledge needed to safeguard institutional and personal digital assets.

Capability Enhancement cum Domain Training Session

"Financial Wisdom on a Secure Tomorrow"

The Department of Computer Applications, in collaboration with the HR Department at Manipal University Jaipur, hosted a two-day offline domain training session titled "Financial Wisdom for a Secure Tomorrow" on 26th–27th May 2025.

The session aimed to empower 43 participating faculty members with practical insights into financial literacy, asset allocation behavior, money management, and the integration of AI in financial analytics. Time management strategies to boost productivity were also a key focus.

Expert speakers included CA Piyush Bansal, Co-Founder of ReadyBooks, and Dr. Amit Hirawat, Assistant Professor, Department of Computer Applications, who also served as the event convener.

the training fostered valuable discussions and hands-on learning, equipping faculty with tools for smarter financial decision-making and enhanced professional efficiency. The event was held over two days, with sessions in Room 028 of Academic Block 2 and Lab 203 of Academic Block 2. The training was convened by Dr. Amit Hirawat of the Department of Computer Applications. This initiative provided a valuable platform for MUJ's educators to gain practical knowledge for financial security and professional productivity.

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Innovative IQ

Our campus was buzzing with entrepreneurial energy during the recent "Innovative IQ" event. Aligned with World Creativity and Innovation Day, the event provided a dynamic platform for students to pitch their unique startup ideas to a panel of mentors and industry experts. Participants gained invaluable feedback, honed their problem-solving skills, and networked with like-minded peers, taking their first steps toward transforming bold ideas into impactful ventures. The event was a resounding success, showcasing the incredible talent and ingenuity within our student community

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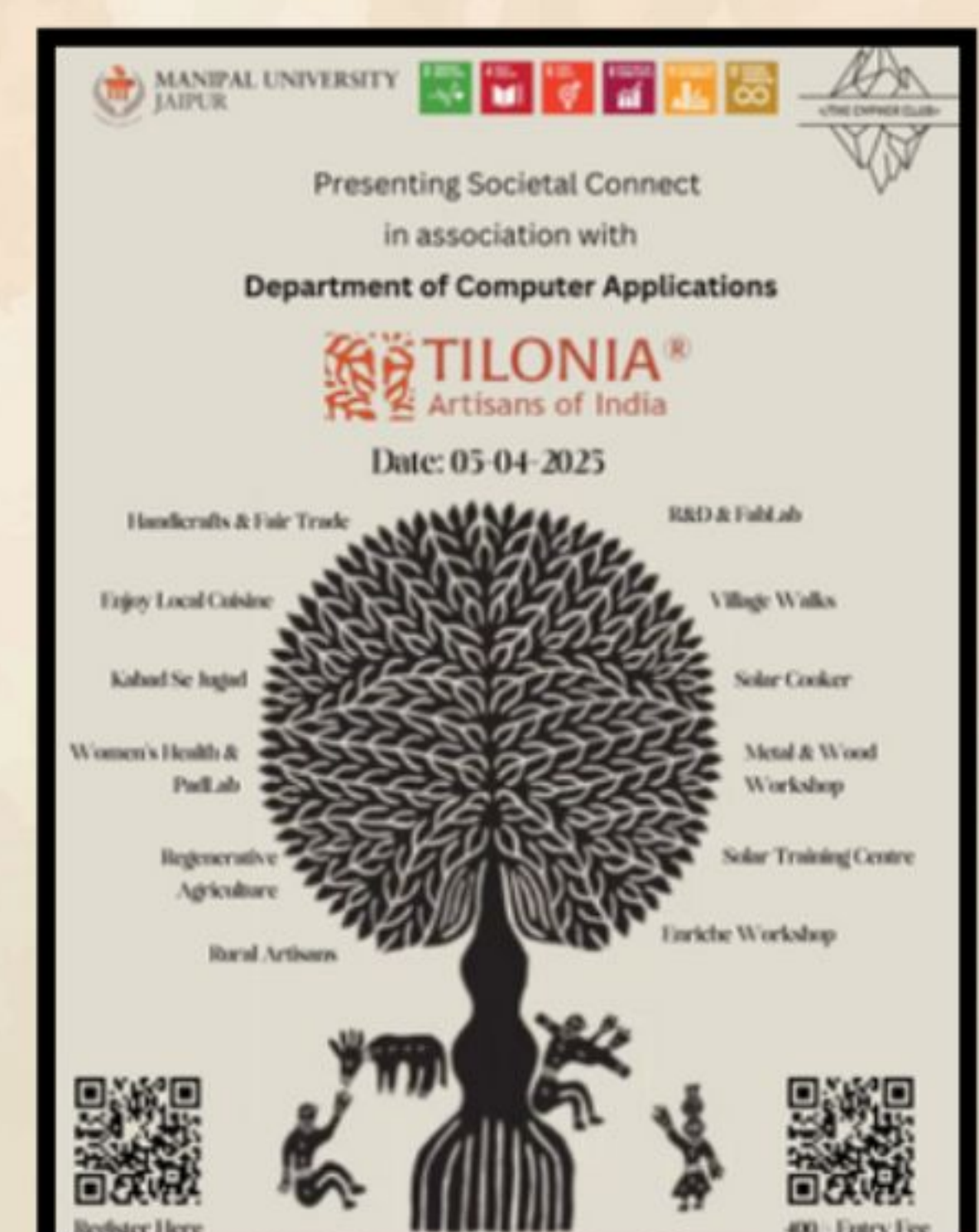
Tiloniya Field visit

Societal Connect: A Journey into Grassroots Innovation at Tiloniya

On 5th April 2025, the Department of Computer Applications and The Cypher Club organized "Societal Connect," a visit to Tiloniya village for 200 students from Manipal University Jaipur. The trip to Tiloniya, home of the renowned Barefoot College founded by Bunker Roy, was an enriching and inspiring experience. The visit aimed to provide students with firsthand experience of community-driven initiatives in sustainable living and rural empowerment, bridging the gap between traditional knowledge and modern solutions.

The immersive experience was designed to foster awareness and social responsibility by allowing students to engage directly with local residents, educators, artisans, and social workers. The event, coordinated by **Dr. Kuntal Gour** and **Dr. Arpana Sinhal**, successfully fostered creativity and a sense of responsibility toward community-driven development.

Highlights of the Visit:

- Grassroots Innovation: Students observed practical insights into eco-friendly solutions through demonstrations at the R&D FabLab, the Solar Cooker demo, and the "Kabad Se Jugad" (innovation from waste) initiative.
- Cultural Immersion: Participants engaged with local artisans, observed handicraft workshops, and enjoyed a traditional lunch, experiencing local cuisine and hospitality.
- Educational Engagement: The visit offered deep insight into rural empowerment and self-sufficiency through interactions with educators and observations of the village's unique educational ecosystem.

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Faculty publication

Journal and Conference Publications
Top Published Papers (Indexed in Scopus, WoS, SCIE

Faculty	Title (Published Paper)	Journal/Conference/Book Chapter	Indexing	Quartil
Dr. Timothy Malche	Voice-activated home automation system for IoT edge devices using TinyML	Journal	Scopus	Q1
Dr. Linesh Raja	Performance Evaluation of CNN-Based Model for the Parking Slot Detection from Dashcams	Conference	Scopus	Q3
Dr. Pragya	Challenges on transition from a web application to a mobile app	Conference	Scopus	Q4
Dr. D. P. Bhatt	Major Crops Water Requirements and Automated Irrigation Scheduling System	Journal	Scopus	Q2
Dr. Shilpa Sharma	ROLE OF ARTIFICIAL INTELLIGENCE IN OPTIMIZING DIGITAL MARKETING: AN EMPIRICAL STUDY	Journal	WoS	-
Dr. Govind Murari Upadhyay	Memristor loaded cross-coupled differential voltage sense amplifier design with improved performance	Journal	Scopus	Q1
Dr Geeta Chhabra Gandhi	Hybrid robot navigation: Integrating monocular depth estimation and visual odometry	Journal	Scopus	Q1
Dr. Monika Vishwakarma	StaEn-IDS: An Explainable Stacking Ensemble Deep Neural Network-Based Intrusion Detection System	Journal	Scopus	Q1

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publication Certificate
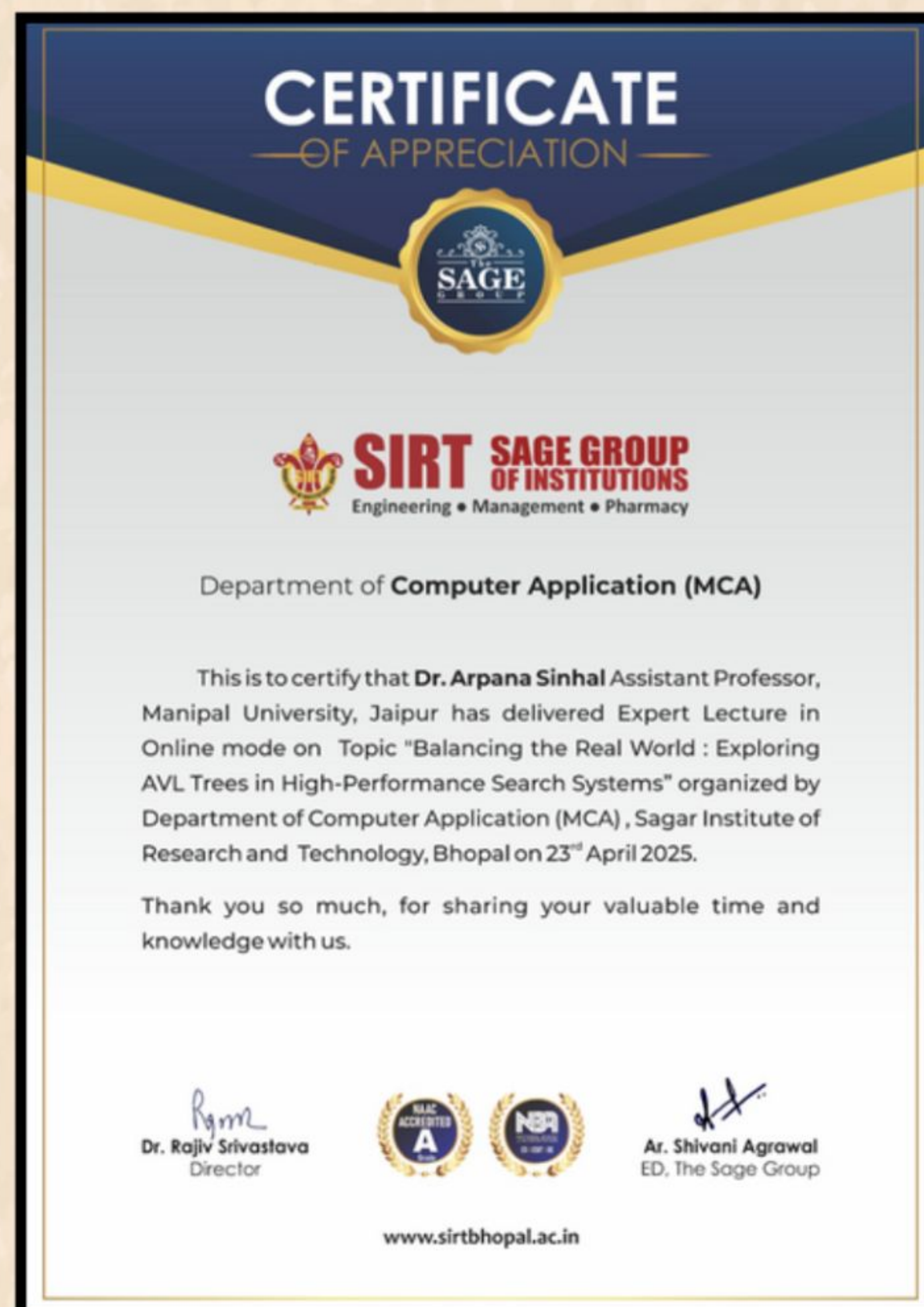

Patent Activity

Faculty	Title of Patent Published/Filed
Dr. Timothy Malche	AQUASIGHT: AN ASSISTIVE SYSTEM FOR ENHANCED NAVIGATION IN AQUATIC ENVIRONMENTS
Dr. Govind M. Upadhyay	A CareerCanva System for Intelligent Career Pathway and Portfolio Management
Dr. Arpana Sinhal	A STRESS MONITORING SYSTEM USING WEARABLE SENSOR DATA INTEGRATED WITH AN

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Achievements

Faculty Achievements

We are delighted to celebrate the recent achievements of our faculty. Congratulations to **Dr. Arpana Sinhal** on the publication of her patent for a "Stress Monitoring System Using Wearable Sensor Data." Dr. Sinhal also shared her expertise as a distinguished speaker, delivering an expert lecture on "Exploring AVL Trees in High-Performance Search Systems" for the Sagar Institute of Research and Technology, Bhopal. These accomplishments highlight the dedication and innovative spirit within our academic community

CERTIFICATE
OF APPRECIATION

SIRT SAGE GROUP OF INSTITUTIONS
Engineering • Management • Pharmacy

Department of **Computer Application (MCA)**

This is to certify that **Dr. Arpana Sinhal** Assistant Professor, Manipal University, Jaipur has delivered Expert Lecture in Online mode on Topic "Balancing the Real World : Exploring AVL Trees in High-Performance Search Systems" organized by Department of Computer Application (MCA) , Sagar Institute of Research and Technology, Bhopal on 23ʳᵈ April 2025.

Thank you so much, for sharing your valuable time and knowledge with us.

Dr. Rajiv Srivastava
Director

Ar. Shivani Agrawal
ED, The Sage Group

www.sirtbhopal.ac.in

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Achievements
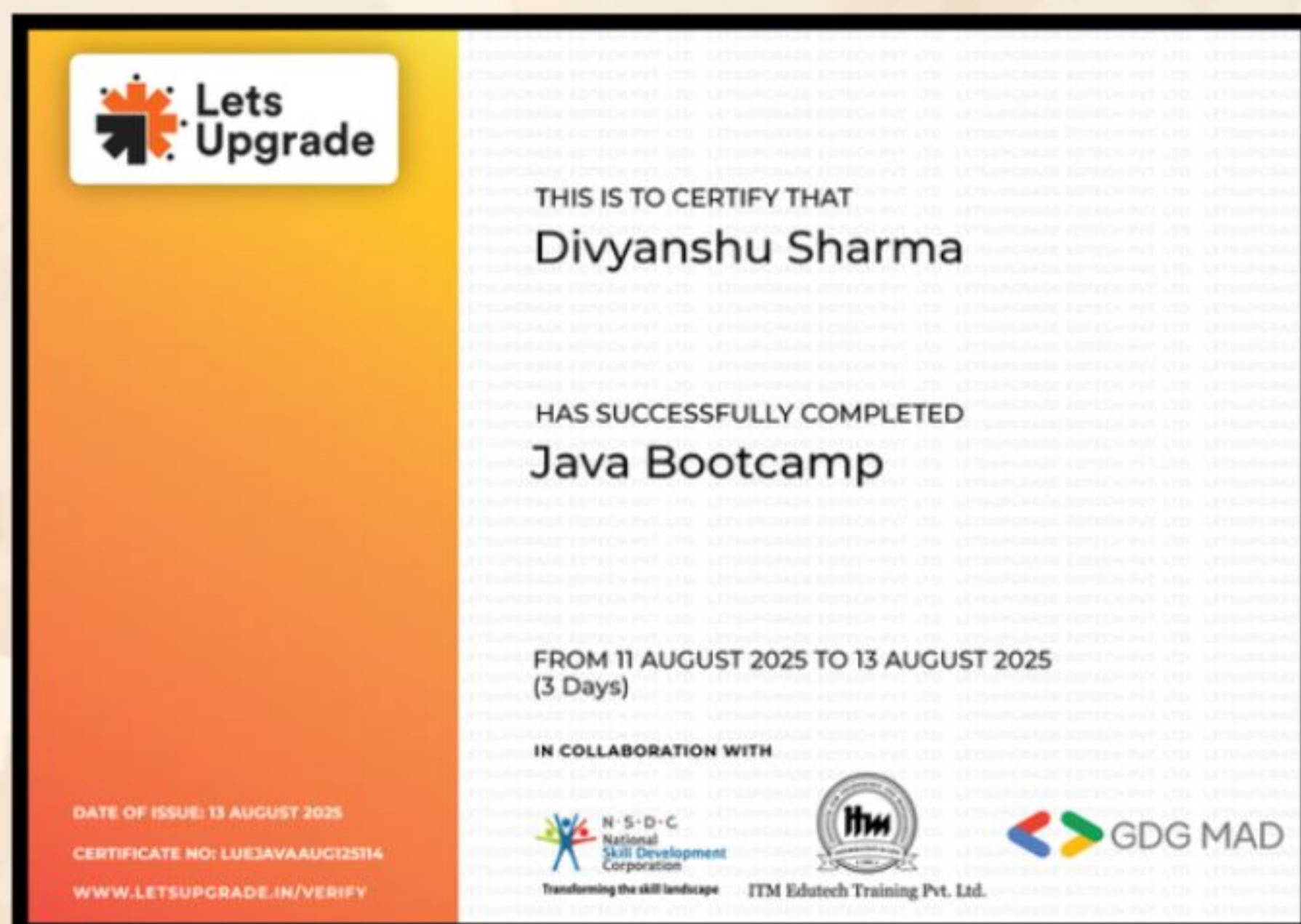
Student Achievements

Kudos to **Mohit Sharma** for his outstanding achievement in earning the AI and Data Scientist Skill Certification from One Roadmap on September 7, 2025. This accomplishment showcases his dedication and proficiency in a cutting-edge and highly sought-after field. We are incredibly proud of his proactive efforts to enhance his skills and wish him continued success in his future endeavors

We are delighted to congratulate **Ashutosh Sharma** on successfully completing his course in Data Analytics from Teachnook. This program was conducted in collaboration with Cognizance'24, the prestigious annual tech fest of IIT Roorkee. Ashutosh's initiative to upskill in this critical field is a testament to his dedication. Let's all join in congratulating him on his achievement

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Student Achievements

We'd like to congratulate **Divyanshu Sharma** on successfully completing a 3-day Java Bootcamp with LetsUpgrade last week! This program, held in collaboration with the National Skill Development Corporation (NSDC) and Google Developer Groups (GDG), focused on intensive, hands-on Java training. Divyanshu's dedication to sharpening his coding skills is a great example for us all. Please join us in congratulating him

We are proud to announce that our student, **Nitin Sahu**, successfully presented his research paper titled, "Optimizing Diagnostic Accuracy in Healthcare by using Deep Learning," at the prestigious 4th 2025 IEEE World Conference on Applied Intelligence and Computing (AIC 2025). The conference was held in Delhi from July 26-27, 2025. Congratulations to Nitin on this significant academic achievement.

Article Crafting

Constantly Evolving for the Modern Era

One of the biggest misconceptions about Java is that it's old and slow. In reality, Java is evolving faster than ever. With a new release every six months, the language is constantly being updated with modern features. Recent additions like lambda expressions, records, and the groundbreaking Project Loom (which introduces virtual threads for massive concurrency) are making Java more concise, performant, and developer-friendly. This commitment to modernization ensures that Java isn't just keeping up; it's continuing to lead.

Learning Java means you're not just learning a language; you're gaining access to a mature, massive, and continuously improving ecosystem. It opens doors to careers in enterprise software, Android development, big data, and cloud computing, making it a timeless skill for any aspiring developer.

Created by- Vansh Jasuja