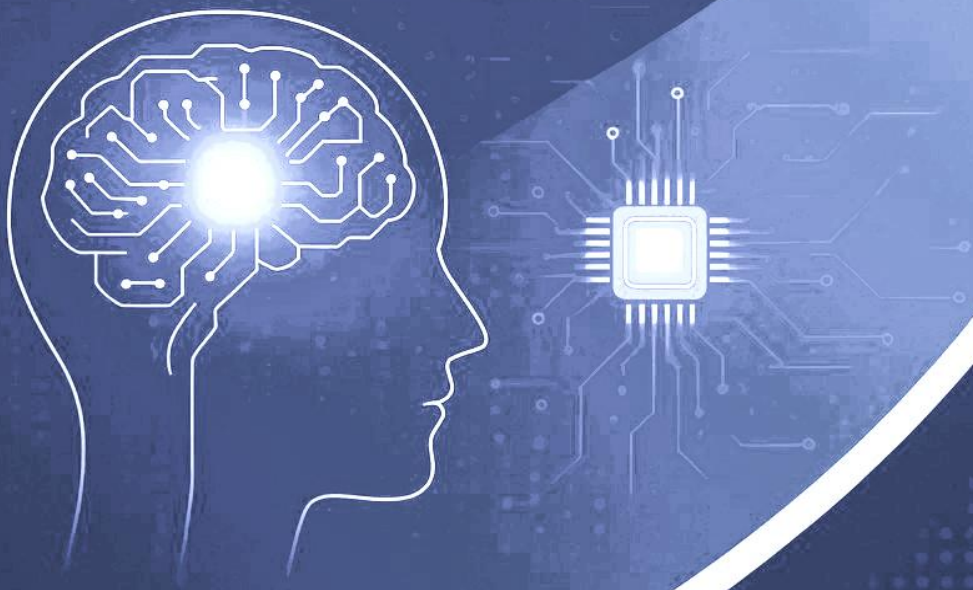
K R MANGALAM UNIVERSITY

CENTRE OF EXCELLENCE IN ARTIFICIAL INTELLIGENCE (COE-AI)

ANNUAL REPORT 2024–2025



MESSAGE FROM THE DESK of Hon'ble Vice-Chancellor - Prof. (Dr.) Raghuvir Singh,

As we mark another transformative year at the Centre of Excellence in Artificial Intelligence (COE-AI), I extend my heartfelt greetings to all faculty, students, and collaborators. AI is no longer just a technology but a powerful force for change—reshaping education, industry, and society.

At COE-AI, we have remained committed to harnessing AI responsibly and innovatively. Over the past year, we witnessed remarkable growth—hackathons, faculty development programs, research initiatives, and the landmark IESS 2025 Conference stand testament to our collective drive for excellence.

Our focus remains steadfast: to cultivate an ecosystem where interdisciplinary research, practical learning, and societal impact coalesce. I am proud of the strides made by this center and remain optimistic about the journey ahead—one fueled by innovation, collaboration, and academic rigor.

Together, let us continue to forge a future where AI elevates education and empowers communities.

— Prof. (Dr.) Raghuvir Singh

Hon'ble Vice-Chancellor

K. R. Mangalam University, Gurugram

MESSAGE FROM THE DESK – Chairperson

Dr. Shweta Bansal, Centre of Excellence in Artificial Intelligence, K. R. Mangalam University

It gives me immense pride to present the Annual Report 2024–2025 of the Centre of Excellence in Artificial Intelligence (COE-AI) at K. R. Mangalam University. Since its establishment, COE-AI has been envisioned as a hub of innovation, creativity, and interdisciplinary research in emerging technologies such as Artificial Intelligence, Machine Learning, Natural Language Processing, Data Science, and Cybersecurity.

The past year has been transformative. We have successfully organized large-scale academic events such as Hack KRMU 4.0 and the Deep Data Hackathon, provided training and internships in collaboration with IIT Guwahati, CDAC Noida, and NIT Hamirpur, and contributed to research through publications, patents, and an edited book series on AI. The landmark National Conference on Innovation, Entrepreneurship, and Sustainable Solutions (IESS 2025) and International Conference MRIE-2025 -IEEE Sponsored further strengthened our role as a catalyst for academic and industrial collaboration.

Our students remain at the heart of this journey. Through hands-on projects, industrial exposure, and mentorship, we continue to nurture them into innovators, problem solvers, and future leaders in AI. At the same time, our faculty members have consistently strived to push the boundaries of research and teaching excellence, ensuring that COE-AI remains a frontrunner in the academic landscape.

As Chairperson, I extend my heartfelt gratitude to our Hon'ble Vice-Chancellor, university leadership, collaborators, faculty, students, and industry partners for their unwavering support and contributions. Together, we have laid a strong foundation for COE-AI, and I am confident that in the coming years, we will scale even greater heights—driving innovation, fostering entrepreneurship, and making a positive impact on society.

Let us continue to work collectively towards shaping an AI-driven future that is inclusive, ethical, and sustainable.

Vision & Mission

Vision:
To develop smart solutions for the future by leveraging next-generation technologies like Artificial Intelligence, Deep Learning, Machine Learning, Natural Language Processing, and more. The center aims to harness the potential of AI to augment the state's innovation ecosystem and create a multiplier impact on the economy, industry, and society.

Mission:

- Expedite employment skills via programs and training aligned with the latest industry requirements in Data Science & Machine Learning.
- Facilitate collaborative research among faculty and students, attracting international expertise and practitioners to foster innovation and advance knowledge in AI.

🗓️ Key Activities & Events (2024-2025)

1. Workshop Autokriti 14.0 – NIT Kurukshetra (27th – 29th September 2024)

K.R. Mangalam University marked a significant presence at the prestigious Autokriti 14.0 Workshop, organized by NIT Kurukshetra from 27th to 29th September 2024. This national-level event focused on emerging technologies and innovation, attracting enthusiastic participation from engineering institutions across the country.

A total of 93 students from the Centre of Excellence in Artificial Intelligence (CoE-AI) and 110 students from the School of Engineering and Technology (SOET) actively engaged in various hands-on workshops and technology-driven sessions. The participation demonstrated a strong commitment to exploring and applying future technologies.

🏆 Notable Achievements:

Vaibhav, a student of B.Tech CSE, was honored with the prestigious Best Student Award in the Internet of Things (IoT) category, recognizing his technical acumen, innovation, and performance during the workshop.

Six students from K.R. Mangalam University were selected as Campus Ambassadors for Autokriti 14.0, acknowledging their proactive involvement, leadership skills, and contributions to promoting the event.

🏅 Institutional Recognition:

The Centre of Excellence in Artificial Intelligence received formal recognition for its active and meaningful participation in Autokriti 14.0. This acknowledgment reflects the institution’s dedication to nurturing talent and promoting excellence in the fields of Artificial Intelligence, IoT, and emerging technologies.

2. Geekathon 2024 – One day Hackathon

Date: Tuesday, 15th October 2024.

Venue: Multipurpose Hall, K.R. Mangalam University.

Mode of Activity: Offline

Time: 9:00 a.m.

Target Group: Students

Faculty Coordinator: Dr Shweta A Bansal

Number of Participants : 250

Brief of the Session: Geekathon 2024, an exhilarating hackathon, was organized by the Centre of Excellence - AI at SOET, K.R. Mangalam University, in collaboration with GEEKROOMS. The event took place on 15th October 2024 at the university's Multipurpose Hall. The hackathon attracted 250 participants from diverse academic disciplines, eager to tackle real-world challenges through creative coding and innovative technology. This one-day, intense competition saw participants working in teams to brainstorm, code, and present their innovative projects aimed at solving real-life problems. The event was designed to provide a collaborative and dynamic environment that fostered both learning and creativity. Geekathon featured mentor-led sessions, where industry professionals guided the participants, helping them refine their ideas and boost their technical knowledge. In addition to the competition, students also engaged in fun activities and tech quizzes, making the event both enjoyable and intellectually stimulating. The hackathon concluded with a presentation of projects, where the top teams were recognized for their exceptional performance in innovation, problem-solving, and project execution. The winning teams were awarded generous cash prizes as a reward for their outstanding work. The event was made possible with the generous support of sponsors such as 91mobiles, Unstop, and Growbinar, who played a vital role in enhancing the overall experience for the participants. Geekathon 2024 was a thrilling and enriching experience,

showcasing the talent and creativity of the students. It provided a platform for participants to demonstrate their technical skills while encouraging innovation and collaboration in the field of technology. Following are the winners of the event:

3rd Prize: Tarun Goel

2nd Prize - Niket Gupta

1st Prize - Harsh Raj

Photo 1: Participants collaborating during Geekathon 2024, brainstorming and developing solutions to tackle real-world challenges."

Photo 2: Geekathon 2024 team with the event winners at K R Mangalam University

Winner Certificate(Sample):

3. Winter Training Program on AI and ML

The Winter Training Program in Artificial Intelligence and Machine Learning (AI/ML) was organized by the Centre of Excellence – AI, School of Engineering and Technology, K. R. Mangalam University, from 6–12 January 2025 in online mode, coordinated by Dr. Shweta Bansal. The seven-day intensive program was designed for both KRMU and external student participants, providing them with a strong foundation in AI/ML concepts while offering practical skills through hands-on sessions.

The training curriculum included supervised and unsupervised learning, neural networks, regression techniques, and Generative AI applications, along with practical exposure using Python, TensorFlow, and the Orange Data Mining tool. Participants were guided through real-world workflows, enabling them to understand problem statements, select appropriate models, gather relevant datasets, build and train models, and present their findings effectively. The program also featured guest lectures from industry experts, which enriched the learning experience by bridging theory with real-world practices.

The sessions were structured day-wise to ensure step-by-step learning: Day 1 introduced clustering techniques and basic ML concepts; Day 2 focused on classification methods and their applications; Day 3 covered regression techniques for predictive modeling; Day 4 dealt with deep learning and ANN architectures; Day 5 emphasized data preprocessing, validation strategies, and accuracy measurement; while Day 6 concluded with cutting-edge sessions on Generative AI and Google GenAI applications. Each day included quizzes, hands-on exercises, and assignments to reinforce learning and encourage practical application.

The program achieved its intended outcomes by equipping participants with the ability to work with diverse AI/ML algorithms, apply structured problem-solving approaches, and visualize workflows effectively using Orange. They gained enhanced competencies in data analysis, model building, evaluation, and presentation of insights.

In conclusion, the Winter Training Program proved to be a highly successful initiative, fostering practical exposure, interactive learning, and conceptual clarity in AI/ML. The positive feedback highlighted participants' interest in continuing advanced-level programs in deep learning, reinforcement learning, and ethical AI, underlining the need for sustained engagement in emerging technologies.

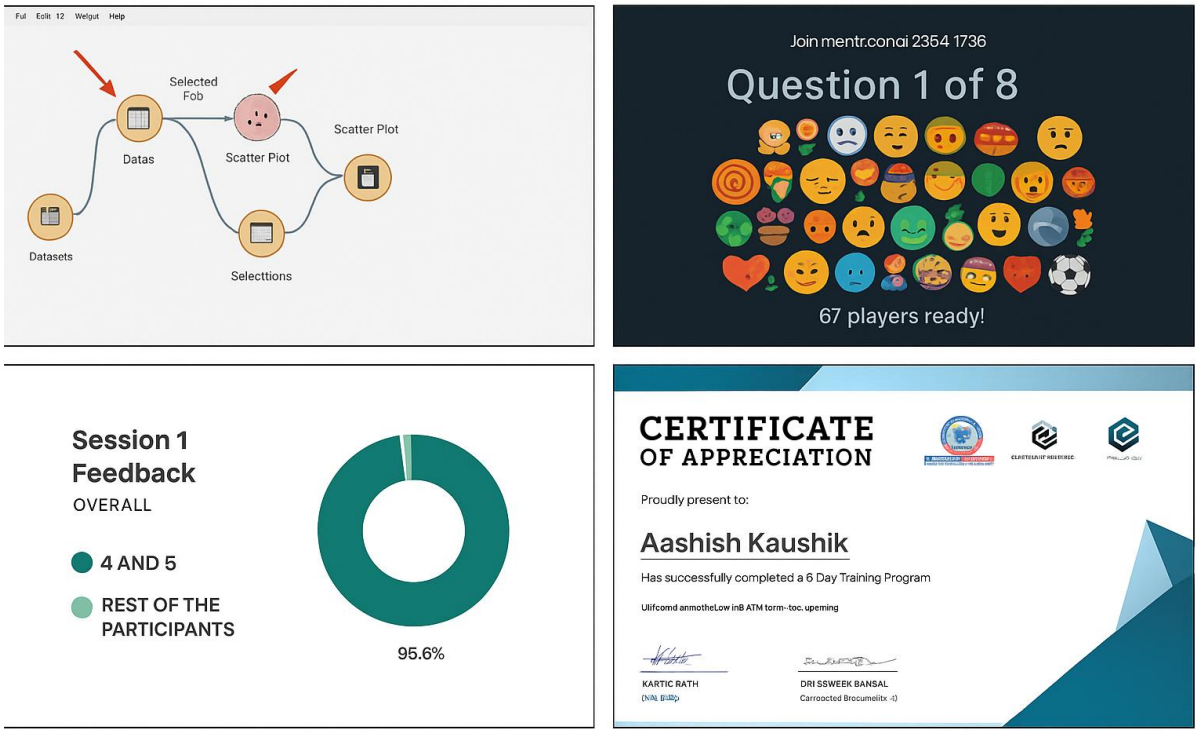


Photo Gallery: Winter Training Program in AI/ML – January 2025, Centre of Excellence – AI

4. Faculty Development Program - Stepping into Emerging Technologies with a Practical Approach: Cybersecurity and AI/ML

The **Faculty Development Program (FDP)** on *"Stepping into Emerging Technologies with a Practical Approach: Cybersecurity and AI/ML"* was organized by the **Centre of Excellence – AI, School of Engineering and Technology, K. R. Mangalam University** in collaboration with **E&ICT Academy, IIT Guwahati** from **22–27 January 2025** at **Room No. B207, B Block** in offline mode. The program was designed exclusively for faculty members with the objective of providing in-depth knowledge and practical exposure to the rapidly evolving fields of Cybersecurity and Artificial Intelligence/Machine Learning (AI/ML). The six-day FDP combined theoretical insights with hands-on training to bridge the gap between academia and industry, empowering educators to effectively integrate emerging technologies into teaching and research practices. The sessions were structured day-wise with specific themes: **Day 1** introduced the fundamentals of Artificial Intelligence and Cybersecurity, led by **Dr. Ajay Singh Raghuvanshi**, highlighting the role of AI in threat detection and prevention. **Day 2**, conducted by **Dr. Bibhudendra Acharya** and **Mr. Ankit Singh**, focused on supervised learning applications in cybersecurity, including phishing detection and spam filtering, with practical exercises. **Day 3** emphasized unsupervised learning and anomaly detection in network traffic using

clustering algorithms, with inputs from Dr. Raghuvanshi and practical sessions by Mr. Singh. **Day 4** covered advanced topics such as neural networks and predictive modeling for cybersecurity, with participants building and training their own neural network models. The final day concentrated on real-world integration of AI/ML with cybersecurity challenges, addressing ethical considerations, tools, and frameworks, while participants developed end-to-end solutions in simulated environments under the guidance of Dr. Raghuvanshi and Mr. Singh, with smooth coordination facilitated by **Ms. Nitishmita Kalita**. The FDP proved to be a highly engaging and impactful initiative, significantly enhancing the technical expertise and pedagogical capabilities of the participating faculty members.

FDP on Emerging Technologies (Cybersecurity & AI/ML), 22–27 January 2025

5. Hackathon (Hack KRMU 4.0)

The Centre of Excellence – AI, School of Engineering & Technology, K.R. Mangalam University, successfully organized the 4th edition of its flagship hackathon, Hack KRMU 4.0, from 20–22 February 2025. The three-day, 54-hour event was designed as a platform to foster innovation, creativity, and problem-solving among students across India. With the central theme *"Build the Unthinkable"*, the hackathon invited students to develop solutions that could make a tangible difference in society while embracing the latest technological frontiers.

This mega-event attracted participation from over 1,000 students nationwide, including innovators from engineering colleges, universities, and start-up ecosystems. Teams worked round-the-clock on projects in emerging domains such as Artificial Intelligence/Machine Learning, Internet of Things (IoT), Augmented/Virtual Reality (AR/VR), Web3, and Open Innovation. The hackathon was not merely a coding competition but a comprehensive learning ecosystem that combined hands-on development, industry mentorship, knowledge-sharing workshops, and peer-to-peer collaboration.

Throughout the event, participants were guided by mentors from academia and industry, who provided expert advice on refining ideas, validating feasibility, and aligning projects to real-world applications. Workshops and knowledge sessions covered critical topics such as scalable AI systems, blockchain solutions, immersive AR/VR experiences, and IoT-driven smart applications, ensuring that students gained both technical know-how and entrepreneurial insights.

Adding to the vibrancy of the hackathon were networking opportunities, cultural activities, and recreational breaks—including energizing sessions like a DJ night and interactive games—which ensured that participants could balance their intense coding sprints with team bonding and relaxation. The spirit of collaboration and competition created a unique ecosystem where young innovators could thrive.

The hackathon concluded with final project pitches before a distinguished jury panel, consisting of industry leaders, academic experts, and entrepreneurs. Teams presented prototypes, business models, and demonstrations, showcasing both technical rigor and innovative vision. The best solutions were rewarded with significant cash prizes—₹50,000 for 1st place, ₹25,000 for 2nd place, ₹15,000 for 3rd place, and ₹10,000 for winners of each thematic track—making the event one of the most competitive student hackathons in the region.

Beyond the awards, Hack KRMU 4.0 created long-term impact by inspiring students to continue working on their prototypes, seek incubation opportunities, and publish their work in conferences and journals. The hackathon also strengthened K.R. Mangalam University's reputation as a hub of innovation and entrepreneurship, further establishing the Centre of Excellence – AI as a leader in bridging the gap between academia and industry.

- **Photographs: Winner**
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First position: SMART SKY	Second position: AQUALOOP

- 

Third Position: SHERRRR	

Winning Teams:

Position	Team Name	Participant Name	University	Prize

1st	SMART SKY	Vaibhav, Dev, Tanushree	K.R. Mangalam University	Rs. 50,000/-
2nd	AQUALOOP	Akshaj, Anshul Varun dubey, Sidhaerth	Vivekananda Institute of Professional Studies	Rs. 25,000/-
3rd	SHERRRR	Siddharth Bhardwaj, Arnav Khanna,Yash Babbar, Yuva Puri	Manav Rachna University	Rs. 15,000/-

- Additionally, **track prizes of Rs. 3,000/- each**, along with **tech goodies**, were distributed to the top performers in AI/ML, IoT, and HealthTech categories.

Track Theme	Team Name	Participant Name	University	Prize
AI & ML	DEBUGARC	Abhijeet Shukla, Arpita Tomar, Ivy Singh, Mohan Sharma	JIIT Noida sec-62	Rs. 3,000/- with goodies
AR/VR	ATMOEYE	Ansh Johri, Shaswat kumar Das, Sachidanand Pathak, Omm rout	KR Mangalam University	Rs. 3,000/- with goodies
IOT	KRPANAHANTA	Luv Goel, Abhay Singh Chauhan, Lakshya Chauhan	Amity University Noida	Rs. 3,000/- with goodies

6. Industrial Visits

On 25th Feb 2025 Centre of Excellence in Artificial Intelligence successfully organized an industrial visit to CDAC Noida a premier R&D organization specializing in high-performance computing, AI, cybersecurity, and software development. The visit provided students with hands-on exposure to state-of-the-art technologies and industry best practices.

This experience enhanced their practical knowledge, bridging the gap between academic learning and industry expectations, and inspiring them to pursue innovative solutions in AI and related fields.

A significant milestone of this visit was the signing of a **Letter of Association between CDAC and K.R. Mangalam University**, paving the way for collaborative activities, including research initiatives, training programs, and industry-academia partnerships. This collaboration aims to equip students with practical exposure, skill development, and real-world problem-solving opportunities, strengthening their industry readiness.

Industry Visit for B.Tech CSE (AI & ML) and B.Tech CSE (Data Science) students to CDAC Noida

7. Kaggle Competition

The Centre of Excellence – AI, K.R. Mangalam University, organized an offline Kaggle Competition in March 2025 under the guidance of Dr. Monika Khatkar. This one-day event was designed to encourage students to apply their data science and machine learning knowledge in solving practical, real-world challenges.

Participants were provided with structured datasets and were required to analyze, preprocess, and build predictive models within a limited time frame. The evaluation criteria focused on model accuracy, innovation in approach, data handling techniques, and interpretability of results. Students employed various techniques such as regression, classification, clustering, and ensemble methods, along with Python libraries like Pandas, Scikit-learn, and TensorFlow.

The competition not only tested participants' technical expertise but also their ability to think critically, optimize solutions, and communicate insights effectively. Teams collaborated in a high-energy environment, simulating real-world data science project conditions where both teamwork and problem-solving skills were equally important.

The event also introduced students to the Kaggle ecosystem, a globally recognized platform for machine learning competitions. This exposure gave them a deeper understanding of how data challenges are tackled at a professional and global level, bridging the gap between academic learning and industry practices.

The competition concluded with the announcement of winners who demonstrated exceptional technical accuracy and creative problem-solving. The initiative not only boosted the confidence of participants but also inspired them to pursue advanced projects, internships, and research in Artificial Intelligence and Data Science.

By providing students with such practical, competitive experiences, K.R. Mangalam University continues to nurture talent capable of contributing meaningfully to the rapidly growing field of AI and data-driven innovation.

8. DeepData Hack – One day Hackathon

On **16th April 2025**, the **Centre of Excellence – AI** in collaboration with the **School of Engineering and Technology (SOET), K.R. Mangalam University**, organized the **Deep Data Hack – One Day Hackathon** in **offline mode**, exclusively for **undergraduate students**. The event witnessed the participation of **42+ teams comprising 3–5 members each**, making it a high-energy and competitive platform that brought together some of the brightest young minds on campus.

The hackathon was designed to explore the transformative potential of **Artificial Intelligence, Deep Learning, and Data Science** in addressing real-world challenges across domains such as **healthcare, finance, social media analytics, and sustainability**. Students engaged in a rigorous 12-hour problem-solving sprint, applying **machine learning models, neural networks, and data visualization techniques** to interpret complex datasets and propose impactful solutions.

Structured to assess not just **technical skills** but also **teamwork, creativity, and innovation**, the event was facilitated by **expert mentors and faculty members** who guided participants throughout the day. The highlight of the hackathon was the **presentation round**, where teams pitched their solutions before a distinguished panel of judges comprising industry experts and senior academicians. Projects were evaluated on the basis of **originality, technical soundness, real-world applicability, and presentation quality**.

The **Deep Data Hack** succeeded in cultivating a culture of **applied innovation and collaborative learning**, while also providing students with practical exposure to **data-driven research and industry practices**. It strengthened the university's mission of producing **future-ready professionals** equipped with the latest AI and data science skills. The event concluded with the **felicitation of winners** and an insightful discussion on the **future scope of deep data applications**, leaving participants motivated to pursue **advanced research, projects, and entrepreneurial ventures** in the field of Artificial Intelligence.

9. **Peer Tutor Initiative: A Student-Led Initiative for Technical Upskilling**

"By the Students, For the Students."

TechSphere: A Student-Led Initiative for Technical Upskilling

Centre of Excellence in AI, has launched **"TechSphere"**, a **peer tutoring initiative** based on the concept of **"By the Students, For the Students." In association with the School of Engineering and Technology (SOET)**. this initiative aims to promote **peer learning and technical upskilling** through student-led workshops.

The Schedule is as follows

TechSphere Workshop Series – Schedule & Overview

TechSphere Workshop Series – Master Schedule

Edition	Date(s)	Title / Focus	Speaker Name	Key Topics Covered	Venue & Time	Faculty coordinator Person(s)
TechSphere 2025	**24 Feb 2025 (Day 1)**	*Technical Upskilling*	Yashraj, Urvashi, Piyush B Tech 1st year	AI & Prompt Engineering, Web Architecture, Claude Backend	A213, A Block 9:30 AM onwards	Dr Pankaj Agarwal, Dr Monika Khatkar
	25 Feb 2025 (Day 2)	*Advanced Web & AI Tools*	Yashraj, Urvashi, Piyush B Tech 1st year	Next.js Framework, DeepSeek, Perplexity AI, Project Building & Deployment via GitHub	A213, A Block 9:30 AM onwards	Dr Pankaj Agarwal, Dr Monika Khatkar
TechSphere 2.0	**21 Mar 2025**	*Mobile Development with React Native*	Om Mishra B Tech FSD-3rd Year	React Native & Expo, UI Design, State Management, API Integration, Navigation, App Building & Deployment	A213, A Block 10:00 AM onwards	Dr Pankaj Agarwal, Dr Monika Khatkar
TechSphere 3.0	**24 Mar 2025 (Day 1)**	*GitHub & Intro to Kaggle*	Tarun, Shubh Singhal B Tech 2nd year	Git Commands, GitHub Basics, Version Control, Quick Intro to Kaggle	A213, A Block 9:30 AM onwards	Dr Pankaj Agarwal, Dr Monika Khatkar
TechSphere 3.0	**25 Mar 2025 (Day 2)**	*Kaggle – Real-World Projects*	Tarun, Shubh Singhal B Tech 2nd Year	Kaggle Projects, GitHub Best Practices, Open Source Contributions, Final Q&A & Discussion	A213, A Block 9:30 AM onwards	Dr Pankaj Agarwal, Dr Monika Khatkar
TechSphere 2025	**04 April 2025**	*Data Visualization, Machine*	Yashraj, Rihika,	Hands-on experience in AI/ML. Data	A 213, 9:30 onwards	Dr Pankaj Agarwal, Dr

Edition	Date(s)	Title / Focus	Speaker Name	Key Topics Covered	Venue & Time	Faculty coordinator Person(s)
Unlocking the Future of AI and Data Visualization		*Learning, APIs, Prompt Engineering*	Urvashi B Tech 1st year	Visualization, API Integration		Monika Khatkar
Deep Learning	**15 April**	*Basics of Neural Network , RNN, CNN Netc*	Kartik Rathi	Hands-on experience in AI/ML. Deep learning	A213, 9:30 Onwards	Dr Pankaj Agarwal, Dr Monika Khatkar

Conveners for All Workshops

- **Dr. Pankaj Agarwal**
- **Dr. Monika Khatkar**

Day 1 Report – 24th February 2025:

The first day of the TechSphere workshop kicked off with an enthusiastic group of over 55 first-year students eager to dive into the world of web development. The session began with a fast-tracked introduction to **Website Development**, where participants were guided through the fundamentals of building dynamic, responsive websites using modern frameworks and tools. Following this, the focus shifted to **Prompt Engineering**, where students learned how to effectively use AI-driven prompts to streamline development tasks and boost productivity. Mentored by B.Tech CSE students Yashraj and Piyush, the sessions were interactive and hands-on, offering students a solid foundation in current web technologies and AI integration.

Day 2 Report – 25th February 2025:

The second day of the TechSphere workshop emphasized practical application and project-based learning. Students worked on **Hands-on Projects**, where they applied the concepts learned on Day 1 to build and deploy real-world applications.

The workshop witnessed enthusiastic participation from over **55 students** and covered key topics, including **AI and Prompt Engineering, Web Architecture, Claude Back-**

End, Next.js Framework, DeepSeek, Perplexity AI, and Project Building & Deployment on GitHub.

The mentors provided continuous guidance on version control, collaborative development, and deployment processes using GitHub. By the end of the session, students who successfully completed the tasks were awarded a **Special Certificate of Completion**, recognizing their efforts and newly acquired skills.

The workshop, coordinated by Dr. Pankaj Agarwal and Dr. Monika Khatkar, provided a dynamic and engaging learning environment, reinforcing the value of peer-led initiatives in technical upskilling and career readiness.

TechSphere 2.0 Workshop Report – Mobile Development with React Native
Date: 21st March 2025 | Time: 10:00 AM Onwards | Venue: A213, A Block

The **School of Engineering and Technology**, in collaboration with the **Centre of Excellence in AI**, organized **TechSphere 2.0**, a hands-on **Mobile Development Workshop** exclusively for 1st and 2nd-year students on **21st March 2025**. The workshop aimed to introduce students to the world of cross-platform mobile app development using **React Native and Expo**.

Led by **resource person Om Mishra**, the session covered a wide array of essential topics, including **project setup & structure, UI building with React Native components, state management**, and **navigation in React Native**. Students also gained practical knowledge about **working with APIs, data fetching**, and **deploying mobile applications**. The workshop provided a strong foundation for mobile development through interactive sessions and real-time coding examples.

The event was successfully coordinated by **Dr. Pankaj Agarwal** and **Dr. Monika Khatkar**, with student coordinators **Ansh and Vikas (B.Tech AI & ML)** playing a key role in organizing the session. TechSphere 2.0 received active participation and positive feedback, empowering students with valuable skills in mobile app development and boosting their confidence in working on real-world tech projects.

TechSphere 3.0 Workshops Report – GitHub & Kaggle Training
Date: 24th & 25th March 2025 | Venue: A213, A Block | Time: 9:30 AM onwards

The **School of Engineering and Technology** at K.R. Mangalam University, in collaboration with the **Centre of Excellence in AI**, successfully organized **TechSphere 3.0**, a two-day workshop exclusively for first-year students. Held on 24th and 25th March 2025, the workshop focused on equipping students with foundational and practical knowledge of **GitHub** and **Kaggle**, vital tools in the developer and data science ecosystems.

Day 1: GitHub & Introduction to Kaggle

The session began with an in-depth introduction to **Git & GitHub**, covering basic commands, version control workflows, and collaboration techniques. Students actively participated in Q&A sessions to clarify concepts and gain hands-on experience. The day concluded with a brief introduction to **Kaggle**, sparking curiosity about data science and machine learning competitions.

Day 2: Kaggle – Real-World Project

The second day transitioned into real-world project implementation using **Kaggle**. Participants learned about GitHub best practices, contributing to open-source projects, and navigating the Kaggle platform effectively. The session emphasized practical exposure, teamwork, and showcased the application of skills in real-world scenarios. The workshop concluded with a final Q&A session and a closing discussion.

The sessions were led by resource persons **Tarun Goel** and **Shubh Singhal**, under the guidance of conveners **Dr. Pankaj Agarwal** and **Dr. Monika Khatkar**, ensuring smooth coordination and an engaging learning atmosphere. TechSphere 3.0 once again highlighted the strength of student-led initiatives in fostering practical learning and technical growth.


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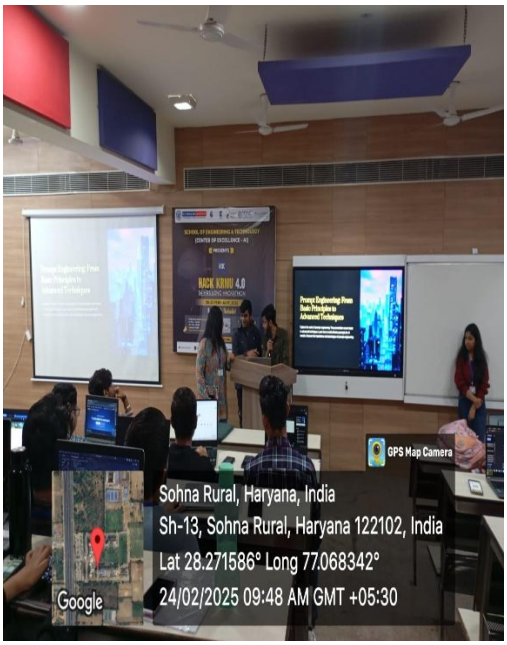
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K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION
SCHOOL OF ENGINEERING AND TECHNOLOGY
presents
TechSphere 2.0
MOBILE DEVELOPMENT WORKSHOP
(eligible 1st & 2nd year students)
TOPICS TO BE COVERED:
• INTRODUCTION TO REACT NATIVE & EXPO
• PROJECT SETUP & STRUCTURE
• BUILDING UI WITH REACT NATIVE COMPONENTS
• STATE MANAGEMENT IN REACT NATIVE
• NAVIGATION IN REACT NATIVE
• WORKING WITH APIS & DATA FETCHING
• BUILDING & DEPLOYING THE APP
Time: 10:00 AM Onwards
Date: 21ST MAR, 2025
Venue: A213,A block
Resoure Person: Om Mishra
Conveners
Dr. Pankaj Agarwal
Dr. Monika Khatkar
Student Coordinators
Ansh & Vikas
B.Tech (AI & ML)
To Register scan this QR code


GPS Map Camera
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4April workshop details

15 April Workshop details

The **School of Engineering and Technology** at **K.R. Mangalam University**, in collaboration with **Center for Embedded Product Design**, organized a *Hands-on Workshop on Deep Learning* on **15th April 2025** at **A-213, A Block**.

The session was led by **Mr. Kartik Rathi**, who provided in-depth insights into various core concepts including **Neural Networks**, **Backpropagation**, **Gradient Descent**, **Convolutional Neural Networks (CNNs)**, and **Recurrent Neural Networks (RNNs)**. The workshop focused on real-world applications and practical implementation, enabling participants to gain valuable hands-on experience.

Key benefits for the attendees included a **Certificate of Participation**, **networking opportunities**, **access to exclusive learning resources**, and direct interaction with the expert.

The workshop was convened by **Dr. Shweta Bansal** and **Dr. Monika**, and received an enthusiastic response from students, contributing to their **skill development** and industry readiness in the field of **Deep Learning and AI**.

7. Hack4Kaggle 1.0 – "Learning through Doing"

The Centre of Excellence in Artificial Intelligence at K.R. Mangalam University, in association with the School of Engineering and Technology, successfully hosted Hack4Kaggle 1.0 on April 29, 2025, with the theme *"Learning through Doing."* This high-impact hackathon was designed to foster real-time problem-solving, applied learning, and innovation, simulating industry-level challenges for budding technologists.

The primary objectives of the hackathon were to encourage hands-on learning in AI/ML, provide a platform for students to apply their theoretical knowledge in practical scenarios, build team-based collaboration and time-bound execution skills, and simulate real-world AI problem-solving using the Kaggle platform.

The event structure comprised two major components. The first was a Technical Quiz, which assessed participants' foundational understanding of AI and ML concepts through a timed evaluation. The second was the Model Optimization Task, where participants developed machine learning models and submitted them on the Kaggle platform. Submissions were evaluated on the basis of model accuracy, innovation in approach, technology stack, and quiz performance, all under strict timelines to mirror industry-level execution pressure.

The competition witnessed intense participation, and the results highlighted the high level of technical proficiency among students. Team Express-C (Team ID: 3), consisting of Anurag Pandey, Anant Soni, and Pabitra Giri, secured First Place with a model accuracy

of 99.01%, using Python, Scikit-learn, and XGBoost. Team EcoRoute (Team ID: 8), led by Alka Santhosh, Nikhil, and Abhyuday, won Second Place with an accuracy of 98.45%. Team 404 JAS Found, comprising Arshiya Tahim, Jigyasa Singh, and Shubham Dey, bagged the Third Place with 97.30% accuracy. The margin of less than 2% between the top three teams reflected the fierce competition and technical excellence on display.

The event also featured a guest lecture by Ms. Neha from GT, who delivered an inspiring address on the transformative power of AI. Her motivational insights encouraged students to view AI not only as a career path but also as a powerful enabler for social and industrial impact.

Hack4Kaggle 1.0 concluded as a resounding success, fulfilling its vision of experiential learning, innovation, and skill development. The event empowered students to tackle complex, real-world problems using machine learning and data science tools. With such initiatives, the Centre of Excellence in AI at K.R. Mangalam University continues to strengthen its mission of nurturing future-ready professionals and bridging the gap between academic knowledge and industry applications.

Conferences

1. **International Conference on Multidisciplinary Research and Innovations in Engineering (MRIE-2025) – IEEE**

The **2nd International Conference on Multidisciplinary Research and Innovations in Engineering (MRIE-2025)** was organized on 30th and 31st July 2025 in hybrid mode. The conference (IEEE Conference ID-66930) served as a vibrant platform for academicians, researchers, and industry professionals to present their work, exchange ideas, and explore innovative approaches in engineering and technology. The inaugural ceremony began with a welcome address and conference overview by the Program Chair, followed by the felicitation of dignitaries. The event was formally inaugurated by Prof. Raghuvir Singh, Hon'ble Vice Chancellor of K.R. Mangalam University, whose inspiring words set the tone for the two-day event. The Guests of Honor included Prof. M. N. Hooda, Chairman IEEE Delhi Section and Founding Editor-in-Chief of BJIT (Springer Nature), Prof. Amita Dev, Director General, VSET & VSIT, and Prof. Dr. Syed Afzal Murtaza Rizvi from Jamia Millia Islamia. A souvenir release ceremony was also held as part of the inaugural session.

The conference featured keynote addresses and invited talks by distinguished experts. Prof. Amita Dev delivered an insightful talk on the "Paradigm Shift of Artificial Intelligence," while Prof. Usha Jagannathan from IEEE-USA spoke on "India's AI Leap: Innovation for a Billion Futures." Eminent speakers from Intel Corporation, USA, Dr. Gautam Kumar and Dr. Babita Dhayal, shared perspectives on advancements in semiconductor technologies, AI-powered solutions, and AI integration with hardware innovations. The technical sessions were spread across 13 sessions under five broad tracks, namely Advanced Computing Technologies, Cybersecurity and Human Interaction, Emerging Communication Networks and Security, Power, Signals, Integrated Systems and Future Technologies, and Materials Science and Engineering. These sessions highlighted research on cutting-edge areas such as artificial intelligence, machine learning, quantum computing, blockchain, IoT-based healthcare, cybersecurity frameworks, sustainable energy systems, nanomaterials, and renewable technologies. Each session was chaired and co-chaired by eminent academicians and experts, ensuring meaningful discussions and critical insights.

The valedictory function was conducted in a dignified manner and was hosted by Dr. Shweta Bansal, who acknowledged the efforts of all the participants, reviewers, session chairs, co-chairs, and the organizing team. Best Paper Awards were announced across technical sessions to recognize outstanding contributions, which further encouraged young researchers. The participants shared highly positive feedback, appreciating the seamless organization, diversity of topics, and the opportunity to interact with global experts. The hybrid mode was particularly commended for allowing wider participation and accessibility. The two-day event concluded with an optimistic outlook, reinforcing

MRIE as a hub for academic excellence, interdisciplinary collaboration, and innovation in engineering and technology.


CAMPUS OUTREACH ACTIVITY

Prof. M. N. Hoda Delivers Inaugural Address at 2nd IEEE International Conference on MRIE-2025

Cyber Awareness Webinar Empowers

BVICAM Students Attend


K.R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION

IEEE Delhi Section

2ND INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY RESEARCH AND INNOVATIONS IN ENGINEERING (MRIE-2025)

30th–31st July 2025 (Hybrid Mode)

CERTIFICATE OF EXCELLENCE

This is to certify that the paper titled

Paper ID: 763

"FIR-Robot: A Federated Learning Approach for Information Retrieval in Robotic Edge Devices"

authored by

Imran Siraj

, has been awarded the Best Paper Award in Session 13 in

2nd International Conference on Multidisciplinary Research and Innovations in Engineering (MRIE-2025), organized by K.R. Mangalam University, Gurugram, Haryana, India held on 30th–31st July 2025.

BEST PAPER AWARD MRIE-2025

Vice Chancellor

General Chair

Conference Chair

Highlights from the 2nd International Conference on Multidisciplinary Research and Innovations in Engineering (MRIE-2025)

2. National Conference

National Conference on Innovation, Entrepreneurship, and Sustainable Solutions (IESS 2025) on 24–25 March 2025 at the university campus. The event provided a multidisciplinary platform to deliberate on emerging technologies, entrepreneurial strategies, and sustainable practices.

Objectives

The conference aimed to:

- Encourage discussions on advancements in technology and sustainable business practices.
- Provide insights into entrepreneurial strategies for economic growth.
- Bridge the gap between academia and industry through collaborative engagements.
- Promote research and development in sustainable solutions aligned with societal challenges.

Themes and Sub-Themes

The technical tracks included diverse themes such as:

1. Artificial Intelligence, Machine Learning, and Data-Driven Innovations – deep learning, predictive analytics, NLP.
2. Human-Centred Computing and User Experience – HCI, usability engineering, adaptive interfaces.
3. Smart and Sustainable Solutions – green technologies, smart cities, renewable energy, smart agriculture.
4. Blockchain, Cybersecurity, and Distributed Systems – protocols, smart contracts, FinTech, cyber threat detection.
5. Internet of Things (IoT) and Edge Intelligence – IoT architectures, edge and fog computing.

Inaugural Function

The conference began with a Lamp Lighting Ceremony graced by Hon'ble Vice Chancellor, Prof. Raghuvir Singh, keynote speakers Prof. B. Chandra (IIT Delhi) and Mr. Sanjay Kumar (Director, Lepton Projects Pvt. Ltd.), Dean SOET Dr. Pankaj Agarwal, and convenors Dr. Shweta Bansal and Dr. Anshu. The dignitaries emphasized the role of innovation and entrepreneurship in building a sustainable future.

Keynote Addresses

- Prof. B. Chandra (IIT Delhi) delivered insights into AI-driven innovations, neural networks, and future automation.
- Mr. Sanjay Kumar (Lepton Projects) shared perspectives on engineering innovations and sustainability in infrastructure development.

Technical Sessions

The conference featured three sessions (hybrid mode) covering more than 20 high-quality research papers presented by scholars and industry experts:

- Session 1: Corporate digital responsibility, advertising psychology, deep learning, blockchain, and cybersecurity.
- Session 2: AI, IoT, cybersecurity, and predictive analytics.

- Session 3: Machine learning, NLP, deep learning, and environmental studies.

The sessions facilitated interdisciplinary dialogue and vibrant Q&A interactions, reinforcing the conference's collaborative spirit.

Valedictory Function

The valedictory session was held on 25th March 2025, presided by Hon'ble Vice Chancellor Prof. Raghuvir Singh, Dean Dr. Pankaj Agarwal, and Convenor Dr. Shweta Bansal. Highlights included:

- Best Paper Awards recognizing outstanding contributions.
- Vote of thanks delivered by Dr. Tanu Gupta, Co-Convenor.
- Reflection on the importance of linking academia and industry to achieve the UN Sustainable Development Goals (SDGs).

Publications from COE–AI (2024–2025)

During the academic year **2024–2025**, the *Centre of Excellence – Artificial Intelligence (COE-AI)* at K.R. Mangalam University continued its commitment to advancing knowledge dissemination and impactful research. The centre achieved notable success in the domain of publications and scholarly contributions.

A significant milestone was the release of an **edited book series comprising four volumes on Artificial Intelligence**. This interdisciplinary series brought together diverse perspectives and research findings from multiple domains, highlighting AI's transformative role in technology, society, and innovation. The publication not only encouraged cross-disciplinary dialogue but also provided a robust platform for faculty, researchers, and students to showcase their contributions in emerging areas such as machine learning, natural language processing, deep learning, computer vision, and big data analytics.

Additionally, several research papers authored under the mentorship and guidance of COE-AI were **published and awarded at reputed conferences and journals**, underscoring the centre's focus on both quality and applicability. Faculty and student collaborations led to recognition at various academic forums, with selected works receiving the **"Best Paper" award**, reflecting the centre's emphasis on originality and impactful problem-solving through AI-driven solutions.

These publications and recognitions during 2024–2025 not only strengthened the research culture at K.R. Mangalam University but also aligned with COE-AI's vision of harnessing artificial intelligence to drive innovation, foster academic excellence, and create societal impact.

Grants Received – COE-AI (2025–2026)

- **AI-Based Website Development**
  - **Funding Agency:** NeedCFO
  - **Duration:** April 2025 – April 2026 (1 Year)
  - **Grant Received:** ₹1,00,000
  - **Principal Investigator:** Dr. Shweta Bansal
  - **Supporting Document:** Sanction Letter
- **Website Development & Digital Solutions**
  - **Funding Agency:** GGS & Co.
  - **Duration:** April 2025 – April 2026 (1 Year)
  - **Grant Received:** ₹1,00,000
  - **Principal Investigators:** Dr. Swati, Dr. Meenu & Dr. Aman

- **Supporting Document:** Sanction Letter

- **Vedvani – A Digital Form of Vedic Knowledge for School Students**
  - **Funding Agency:** Indian Knowledge Division – Ministry of Education
  - **Duration:** July 2025 – December 2025 (6 Months)
  - **Grant Received:** ₹6,30,000
  - **Principal Investigator:** Dr. Shweta Bansal
  - **Supporting Document:** Confirmation Mail Received (Sanction Letter Awaited)
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Hardware and Software Details

Category	Description	Details
Total Available Systems	Number of Systems	24 systems with high-performance specifications
Hardware	High-performance Workstations	Nvidia GPU, Intel i5/12 GEN processors, 16GB RAM, 1TB SSD
	High-resolution Monitors	7-inch 4K monitors
Softwares	Operating System	Windows 11
	Integrated Development Environments (IDEs)	VS Code, PyCharm, Jupyter Notebook
	Audio recording and Analysis Tools	PRATT, CoolEdit
Open Source Tools	Machine Learning Libraries	TensorFlow, Keras, PyTorch
	Data Analysis and Visualization Tools	Pandas, NumPy, Matplotlib, Plotly
	Big Data Tools	Apache Hadoop, Apache Spark
	Database Management Systems	MySQL
	Version Control Systems	Git, GitHub
Cloud Services	Cloud Computing Platforms	AWS
	Cloud Storage	AWS S3
	Cloud-based Machine Learning Services	AWS SageMaker
	Virtual Labs	AWS EC2 instances

ACHIEVEMENTS

Anuj (BCA 3rd Yr), Krish Agarwal & Somya Sharma (B.Tech CSE AIML, 2nd Yr) won 🏆 *1st Prize ₹20,000* at **Hackverse Hackathon** organized by **IILM University**

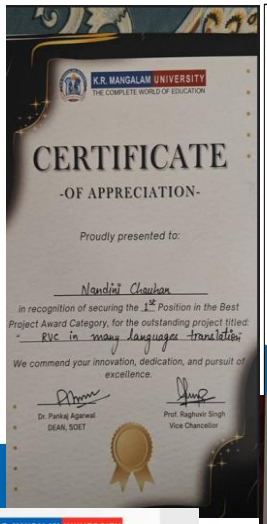
7 back-to-back victories at national hackathons, with the latest at **Rajasthan Hackathon**, earning ₹36,000 in project funding. Team: Ansh Johri, Saswat Das, Sachidanand Pathak, Omm Rout.

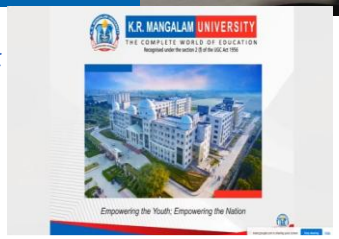
Team SYNTAX-SQUAD-001 won 🏆 *1st Prize in IoT Track* at **Hack on Hill 6.0**, NIT Hamirpur. Team Members: Lavya Beriwal, Yash Malik, Sneha Sharma, Amit Sharma – **(B.Tech CSE, Sem 4)**

2nd Prize at Hackamon 2025 – Galgotias College, Greater Noida
Team: YashRaj, Kritika, Bhumi Tanwar & Piyush Sharma (B.Tech CSE) won ₹40,000 + goodies for their outstanding performance.

Team ROTORS won *"Best IoT Team"* at **Galgotias International Hackathon (GIH)**, earning ₹10,000 for their innovation. Members: Anuj (BCA AI&DS), Krish Agarwal & Somya Sharma (B.Tech CSE AI&ML).

Awarded as Best Project





Awarded as Best paper