



INTEGRAL UNIVERSITY



LUCKNOW

DEPARTMENT OF COMPUTER APPLICATION

Two Weeks Faculty Development Programme on Transformative Learning through Interdisciplinary AI and ML Applications in Emerging Domains



Jan. 08, 2026 - Jan. 21, 2026



10:30 AM - 03:30 PM



Hybrid Mode

INTRODUCTION

The **Department of Computer Application**, under the aegis of the **Human Resource Development Centre (HRDC)**, **Integral University, Lucknow**, successfully organized a **Two-Weeks blended Faculty Development Programme (FDP)** on “**Transformative Learning through Interdisciplinary AI and ML Applications in Emerging Domains**” from **08th - 21st January 2026**.

The Faculty Development Programme featured a rich blend of 22 well-curated academic sessions. Out of these, 15 sessions were organized in online mode through Microsoft Teams, and 7 sessions were conducted in hybrid mode, enabling effective interaction between on-campus and remote participants. The sessions were delivered by eminent academicians and researchers from reputed National and International institutions.

ABOUT THE SPEAKERS

The FDP was significantly enriched by the participation of distinguished international speakers who brought valuable global perspectives to the programme included **Prof. Sarosh H. Patel** (University of Bridgeport, USA), **Dr. Mohammed Siddique**, Majan University College, Oman, **Dr. Rajeev Kumar Shah**, Jiangxi University of Engineering, China, **Prof. Shashi Kant Gupta**, Lincoln University College, Malaysia.

The national speakers comprised eminent academicians and researchers from reputed Indian institutions, who covered a wide spectrum of interdisciplinary AI and ML applications. Notable contributors included **Dr. Shubham Mahajan** (Amity University, Haryana), **Prof. Sireesha Rodda** (GITAM University, Visakhapatnam), **Dr. Sunakshi Mehra** (Delhi Technological University, New Delhi), **Prof. Varaprasad Rao M** (CVR College of Engineering, Hyderabad), **Prof. S. Hemalatha** (Panimalar Engineering College, Chennai), **Prof. M. A. Ansari** (Gautam Buddha

University, Greater Noida), **Dr. Ajay Kumar** (IILM University, Greater Noida), **Dr. Upendra Kumar** (IET, Lucknow), **Dr. Sudhakar Tripathi** (Rajkiya Engineering College, Ambedkar Nagar), **Dr. Gagandeep Kaur** (CGC University, Mohali), **Dr. Pawan Kumar Chaurasia** (BBAU University, Lucknow), **Prof. Mohammad Haroon** (Dept. of Computer Science & Engineering), **Prof. Snober Shabnam Mir** (Dept. of Biosciences), **Dr. Monauwer Alam** (Dept. of Electrical Engineering), **Dr. Mohammad Usama** (Dept. of Environmental Science), and **Dr. Afreen Khan** (Dept. of Computer Application) from Integral University.

SUMMARY of SESSIONS HELD in FDP

Day 1: 08 January 2026 (Thursday)

Inaugural Function

The Faculty Development Programme was formally inaugurated with an inspiring and visionary welcome address by The Faculty Development Programme was formally inaugurated with an inspiring and visionary welcome address by **Prof. Mohammad Faisal**, Head, Department of Computer Application. In his address, he eloquently emphasized the pivotal role of Faculty Development Programmes in strengthening academic excellence.

He highlighting the theme of FDP — **“Transformative Learning through Interdisciplinary AI and ML Applications in Emerging Domains”**, he underscored how Artificial Intelligence and Machine Learning are reshaping education, research, and industry landscapes.

Session 1

Title: Small Object Detection for Medical Applications

Speaker: Dr. Sarosh H. Patel, School of Engineering, University of Bridgeport, USA, is an accomplished researcher in AI-based medical imaging and computer vision.

Dr. Patel discussed advanced deep learning techniques for detecting small objects in medical images, emphasizing their importance in early diagnosis. He explained CNN-based architectures and real-time detection models used in healthcare imaging systems.

Day 2 – 09 January 2026 (Friday)

Session 2

Title: AI in Healthcare from Hype to Impact – Hands-on Approach

Speaker: Dr. Shubham Mahajan, Amity University, Haryana, is known for applied AI research and healthcare technology implementation.

The session focused on practical implementation of AI tools in healthcare. Live demonstrations illustrated predictive analytics, model training, and deployment strategies that move AI from theoretical hype to measurable impact.

Session 3

Title: AI in Healthcare: From Hype to Impact – Research-based Approach

Speaker: Prof. Sireesha Rodda, GITAM Deemed to be University, Visakhapatnam, is an experienced academician and AI researcher in healthcare innovation.

She elaborated on research methodologies, clinical validation, and case studies demonstrating AI's role in disease prediction, medical imaging, and patient data analytics.

Day 3: 10 January 2026 (Saturday)

Session 4

Title: AI-Driven Multimodal Fusion for Speech Recognition

Speaker: Dr. Sunakshi Mehra, Delhi Technological University, New Delhi, specializes in speech processing and AI-driven communication systems.

The session explained multimodal fusion techniques integrating audio, text, and visual signals for improved speech recognition accuracy. Applications in assistive technologies and human-computer interaction were discussed.

Day 5: 12 January 2026 (Monday)

Session 5

Title: Natural Language Processing (NLP) and AI in Business Development

Speaker: Prof. Varaprasad Rao M, CVR College of Engineering, Hyderabad, is an expert in NLP, AI systems, and business analytics.

The session highlighted NLP applications such as chatbots, sentiment analysis, and automated reporting tools that enhance decision-making and customer engagement in business environments.

Session 6

Title: Ethical Considerations, Concerns and Issues of AI/ML in Cybercrime

Speaker: Prof. S. Hemalatha, Panimalar Engineering College, Chennai, has expertise in cybersecurity and ethical AI frameworks.

The speaker discussed AI misuse in cybercrime, data privacy challenges, algorithmic bias, and regulatory frameworks required for responsible AI deployment.

Day 6: 13 January 2026 (Tuesday)

Session 7

Title: Importance of Predicting ICD-10 Codes using Machine Learning in Health Insurance Life Cycle

Speaker: Dr. Ajay Kumar, IILM University, Greater Noida, works in healthcare data analytics and ML applications.

The session covered automated ICD-10 code prediction, improving efficiency in claim processing and minimizing manual errors in insurance workflows.

Day 7: 14 January 2026 (Wednesday)

Session 8

Title: Machine Learning Techniques in Computer Aided Diagnosis for Medical Imaging

Speaker: Prof. M. A. Ansari, Gautam Buddha University, Greater Noida, is a specialist in AI-based diagnostic systems.

He explained ML models used in detecting diseases from radiological images, improving accuracy and early-stage diagnosis.

Session 9

Title: Use of Artificial Intelligence in Integrated Waste Management for the Development of a Smart City

Speaker: Dr. Mohammad Usama, Integral University, Lucknow, focuses on AI applications in smart infrastructure.

The session addressed AI-enabled waste segregation, IoT-based monitoring, and predictive waste collection systems for sustainable smart cities.

Session 10

Title: Challenges/Issues of Implementation of AI/ML in Handling Crimes in Cybersecurity

Speaker: Dr. Upendra Kumar, IET Lucknow, is experienced in cybersecurity and AI-based crime analytics.

The talk highlighted AI in threat detection, digital forensics, and predictive policing, along with technical and ethical implementation challenges.

Day 8: 15 January 2026 (Thursday)

Session 11

Title: Next-Generation Healthcare AI: Multimodal Agents with Retrieval-Augmented Intelligence

Speaker: Dr. Afreen Khan, Integral University, Lucknow, is actively engaged in healthcare AI research. She discussed multimodal AI agents integrating text and medical imaging data, and Retrieval-Augmented Generation (RAG) systems for clinical decision support.

Session 12

Title: Planning & Execution of Smart Cities

Speaker: Dr. Monauwer Alam, Integral University, Lucknow, specializes in urban computing and AI-enabled infrastructure planning.

The session covered AI-driven urban development strategies, traffic optimization, and resource management models

Session 13

Title: AI & Industry 4.0: Empowering the Next Generation of Innovators and Entrepreneurs

Speaker: Dr. Sudhakar Tripathi, Rajkiya Engineering College, Ambedkar Nagar, works in industrial automation and innovation.

He explained AI integration in manufacturing, robotics, IoT systems, and entrepreneurial opportunities in Industry 4.0.

Day 9: 16 January 2026 (Friday)

Session 14

Title: AI-driven Prediction of Diseases and Advancement in Drug Discovery

Speaker: Dr. Gagandeep Kaur, CGC University, Mohali, specializes in AI-driven biomedical research.

The session showcased deep learning applications in early disease prediction and AI-assisted drug discovery processes.

Session 15

Title: AI in Strategy Development for Various Educational Resources

Speaker: Dr. Mohammed Siddique, Majan University College, Muscat, works in AI-enabled educational management.

The session focused on AI-driven curriculum design, resource planning, and adaptive learning strategies.

Day 10: 17 January 2026 (Saturday)

Session 16

Title: AI-Driven Adaptive Security Architectures for Multi-Tenant Cloud Environments

Speaker: Dr. Ashish Tiwari, BBDITM Lucknow, specializes in cloud security and AI-based intrusion detection.

He explained AI-powered cloud security models, anomaly detection, and adaptive defense mechanisms in multi-tenant environments.

Session 17

Title: AI and Data Science: My Experience and Perspectives

Speaker: Dr. Rajeev Kumar Shah, Jiangxi University of Engineering, China, is an international researcher in AI and Data Science.

He shared professional insights, global research trends, and interdisciplinary collaboration experiences in AI and data science.

Day 12: 19 January 2026 (Monday)

Session 18

Title: Deep Learning for Early Detection of Disease

Speaker: Dr. Mukesh Kumar, CGC University, Mohali, works in deep learning applications in healthcare.

The session discussed CNN architectures and predictive analytics models for early-stage disease identification.

Session 19

Title: Artificial Intelligence and Its Applications for Intelligent Systems, Automation, and Decision-Making

Speaker: Prof. Mohammad Haroon, Integral University, Lucknow, is a senior academician in AI systems and automation.

He discussed intelligent systems, automated decision frameworks, and AI integration across industrial and service domains.

Session 20

Title: Best Practices for Integrating Ethical Considerations into Academic Research in the AI Era.

Speaker: Prof. Shashi Kant Gupta, Lincoln University College, Malaysia, is known for research ethics and AI governance studies.

The session emphasized responsible AI research practices, transparency, fairness, and academic integrity in the AI era.

Day 13: 20 January 2026 (Tuesday)

Session 21

Title: AI for Personalized Learning, Automated Grading, and Administrative Tasks

Speaker: Dr. Pawan Kumar Chaurasia, Babasaheb Bhimrao Ambedkar Central University, Lucknow, specializes in AI in education technology.

The speaker demonstrated AI tools for personalized learning environments, automated evaluation systems, and academic administration support.

Session 22

Title: Applications in Medical Imaging, Diagnostics, and Personalized Medicine

Speaker: Prof. Snober S. Mir, Integral University, Lucknow, is an expert in biomedical AI applications.

The session focused on AI-driven imaging diagnostics, predictive healthcare modeling, and personalized treatment approaches.

Day 14: 21 January 2026 (Wednesday)

Valedictory Session

The Valedictory Session of the Faculty Development Programme was conducted with great dignity and academic fervor, marking the successful culmination of an enriching intellectual journey.

The session formally began with the opening remarks by **Dr. Afreen Khan**, who reflected on the objectives, journey, and impactful outcomes of the FDP.

As a gesture of respect and gratitude, floral bouquets were presented to the distinguished dignitaries: Prof. Javed Musarrat, Prof. Furqan Qamar, Prof. Syed Aqeel Ahmad and Prof. Mohammad Faisal

The Welcome Address was then delivered by **Prof. Mohammad Faisal**, Head, Department of Computer Application, who expressed his heartfelt gratitude to the dignitaries, speakers, organizing committee, and participants.

The comprehensive FDP Report was subsequently presented by **Dr. Tasneem Ahmed**, FDP Coordinator, who provided a detailed overview of the sessions conducted, expert lectures delivered, participant engagement, and the overall academic impact of the programme. The report highlighted how the FDP effectively addressed the theme, “**Transformative Learning through Interdisciplinary AI and ML Applications in Emerging Domains**” by integrating theoretical insights with practical applications.

In his address, **Prof. Syed Aqeel Ahmad**, Director, HRDC, elaborated on the strong and collaborative relationship between the Human Resource Development Centre and the University. He explained how HRDC continuously strives to organize high-quality workshops and training programmes aimed at academic and professional excellence. He further stressed the growing importance of Artificial Intelligence and Machine Learning in reshaping higher education, research methodologies, and institutional development.

Following this, **Prof. Furqan Qamar**, the then Advisor to the Chancellor, shared his visionary insights on the FDP theme. He emphasized the transformative potential of interdisciplinary AI and ML applications in emerging domains such as healthcare, finance, education, and governance. He encouraged faculty members to adopt innovative research perspectives and integrate advanced technologies into teaching-learning processes to prepare students for future challenges.

The session was further enriched by the enlightening address of **Prof. Javed Musarrat**, the then Vice Chancellor, who spoke extensively about the significance of AI and ML and their revolutionary contributions across various sectors. He highlighted how these technologies are driving innovation, enhancing efficiency, and opening new avenues for research and entrepreneurship.

The Valedictory Session concluded with a heartfelt Vote of Thanks delivered by **Faizan Mahmood**, FDP Coordinator, who expressed sincere appreciation to the Hon'ble dignitaries, organizing committee, resource persons, and participants for their active involvement and unwavering support.

GLIMPSES OF THE FDP



FACULTY PARTICIPATION

The FDP witnessed an encouraging response from academia and research communities. A total of 162 participants registered for the FDP, out of which **99 participants are from Integral University, while the remaining 63 participants represented International and National diversity**, including **Uzbekistan, Saudi Arabia, and Indian states such as Andhra Pradesh, Delhi, Haryana, Punjab, Odisha, Karnataka, Maharashtra, Rajasthan, Tamil Nadu, Telangana, Uttarakhand, and Uttar Pradesh**. This wide participation reflects the growing relevance and global interest in AI and ML applications across emerging domains.

CONCLUSION

The session has been summarized as a highly enriching and intellectually stimulating academic engagement, marked by insightful deliberations, distinguished presence of dignitaries, and meaningful reflections on the transformative role of Artificial Intelligence and Machine Learning in emerging domains.

The programme successfully highlighted the significance of interdisciplinary collaboration, innovative pedagogy, and research-oriented learning. Through impactful addresses, comprehensive reporting, and collective participation, the session reinforced the institution's commitment to academic excellence, technological advancement, and continuous professional development.

Overall, the session concluded on a positive and inspiring note, leaving participants motivated to integrate advanced AI and ML applications into teaching, research, and institutional growth initiatives.

SDG MAPPING

Aligned with SDG 4, SDG 9 & SDG 17 - Promoting Quality Education, Innovation, and Strong Industry-Academia Partnerships.



Convener:

Prof. (Dr.) Mohammad Faisal

Head, Department of Computer Application

FDP Coordinator(s):

- Dr. Tasneem Ahmed (Associate Professor)
- Dr. Asif Khan (Assistant Professor)
- Faizan Mahmood (Assistant Professor)