

**BCC&i**  
AIDING BUSINESS  
SINCE 1833



Present

# SHORT-TERM EXECUTIVE DEVELOPMENT PROGRAMME ON “APPLICATIONS OF AI AND ML”

*Hybrid (online and classroom combined)*



**Inauguration and Starting Date : 9<sup>th</sup> January 2026**

**Total Duration: 67 hours spread over 5 Weeks (weekend classes – Saturdays and Sundays in hybrid mode)**



**Physical Class Venue: IEST Shibpur Campus**

**\*Programme Organised Jointly by BCC&I and the Industry -Institute Partnership Cell, IEST.**

## USP OF THE COURSE:

The course will offer a unique blend of rigorous academic foundation and cutting-edge practical applications. The USP lies in its comprehensive curriculum designed and delivered by industry experts from BCC&I and the top-tier faculty members of the IEST Shibpur with strong research backgrounds. The participants will benefit from the state-of-the-art infrastructure, including advanced computing labs equipped with the latest hardware and software relevant to AI and deep learning. The course also emphasizes hands-on learning experience through working on real-world projects. Furthermore, the curriculum incorporates emerging trends like Generative AI and Agentic AI, preparing participants for the future trends in the field. Ethical considerations in AI development and deployment are also integrated into the coursework, ensuring responsible innovation. This holistic approach equips the participants with the theoretical knowledge and practical skills to excel as leaders and innovators in the rapidly evolving AI/ML landscape.

## WHO WILL BENEFIT:

- IT Professionals with experience in IT Infrastructure, Banking, Finance, MSME, FMCG, e-Commerce, Healthcare, Manufacturing and Education sector aiming for Applications of AI/ML in key sectors.
- Professionals from Sales, Marketing, HR, Supply Chain, IT, R&D and Risk Management verticals through Industry Use Cases for AI and Generative AI.



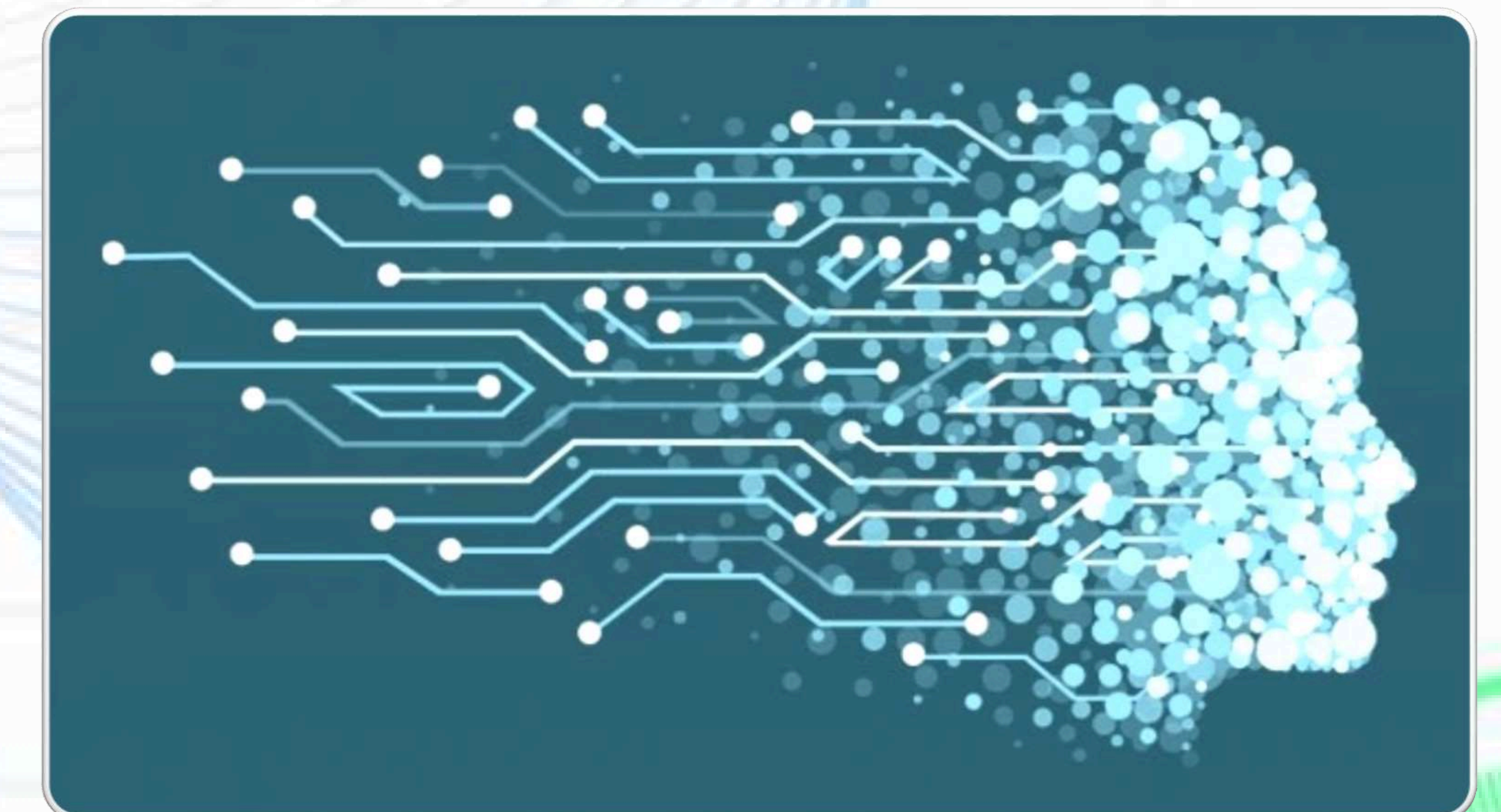
# The Focus Areas of the Course: Applications of AI and ML

## A. Common Topics for All Participants

- Introduction to AI and Machine Learning (Supervised, Unsupervised, Reinforcement Learning)
- Advanced AI/ML Concepts (Deep Learning, NLP, Computer Vision, Generative AI)
- Applications of AI/ML in Key Sectors (Banking, Healthcare, Manufacturing, Climatology)
- AI/ML Productivity Tools (ChatGPT, CoPilot, Google AI, Motion, Midjourney)
- Linear Algebra and Probability Statistics
- Python Programming (Hands-on)
- Data Science and AI/ML for Industry Transformation

## B. Topics Specific to General Participants

- Generative AI and Large Language Models (Architectures, Applications, Risks)
- Adoption of Generative AI in Enterprises
- Industry Use Cases for AI and Generative AI (Sales, Marketing, HR, Supply Chain, IT, R&D, Risk Management)
- Hands-on Case Study: AI-Assisted Process Simulation
- Risks and Responsible AI Usage
- Explainable AI and Trends in Agentic AI
- Final Assessment (Theory, Practical, Presentation)



## C. Topics Specific to Technical Participants

- ❑ Supervised Machine Learning (Regression, Decision Trees, Random Forest, Classification, Bayes Classifier, KNN, SVM)
  - ❑ Hands-on Supervised Machine Learning (Scikit-Learn)
  - ❑ Unsupervised Machine Learning (Clustering, K-Means, Hierarchical, PCA, ANN-based)
  - ❑ Hands-on Unsupervised Machine Learning (Scikit-Learn)
  - ❑ Neural Networks and Deep Learning Foundations (ANN, CNN, RNN)
  - ❑ Hands-on Deep Learning Models (PyTorch: Inference and Training)
- Industry Use Cases for AI/ML  
Final Exam (Theory and Practical)

### LEARNING OUTCOMES:

Live and leading Industry Use Cases based on key functions (AI & Gen AI: Sales, Marketing, HR, Supply Chain, IT, R&D, Risk Management) will be presented by Leading Industry Experts and also from the top-tier Faculty Members of IEST Shibpur.

**Complete Brochure can be found at the following link:**

<https://drive.google.com/file/d/1XUIhY0pIE8i1y1bPET45hHGnaWw2xMP6/view?usp=sharing>

