# Online Workshop on Mastering AI and Machine Learning for Research: Advanced Tools and Strategies

## (Focus: Agribusiness, Manufacturing, and Services Sector)

**Two-day Workshop | 7th-8th March, 2025 | IIPM Bengaluru**

## About the Programme

In today's rapidly evolving research landscape, the research process is becoming increasingly data-intensive, driven by the vast amounts of information available from a variety of sources, such as academic journals, surveys, and IoT devices. AI tools are transforming how researchers manage and analyse these large datasets, enabling them to extract valuable insights and uncover hidden patterns that would otherwise remain undiscovered. Studies indicate that visualizing data with AI tools significantly enhances comprehension and retention, offering a much deeper understanding compared to static textual data.

However, many researchers, particularly those without exposure to AI tools, face challenges in effectively analysing or presenting large-scale datasets. A report by NITI Aayog (2021) reveals that only 15% of researchers in India are familiar with AI/ML tools and techniques. This lack of proficiency restricts their ability to compete on the global stage and limits their chances of publishing in high-impact journals. Consequently, embracing AI tools is essential for enhancing research efficiency, improving publication outcomes, and maintaining a competitive edge in the ever-evolving academic field.

The Two-Day Management Development Programme (MDP) at IIPM Bengaluru aims to equip researchers, academics, and professionals with advanced AI tools and methodologies for academic excellence. Participants will explore AI-driven literature review automation, academic writing enhancement, machine learning, data visualization, and ethical AI practices. With hands-on sessions on NLP, simulation tools, and open science platforms, the program offers practical strategies to boost research efficiency, collaboration, and impact, making it a key event for those leading AI-powered research.

## Target Group

The program is designed for:

- Academicians, researchers, and doctoral scholars looking to enhance their research with AI tools.
- Industry professionals in R&D, data analysis, and innovation.
- Policy makers and analysts interested in AI for data synthesis and visualization.
- Graduate and Postgraduate Students eager to adopt AI techniques for research.
- Non-technical researchers seeking to simplify AI concepts for their work.

## Programme Content:

This MDP covers the use of AI tools to enhance academic research and writing.

### 1. Literature Review Automation

Integrating AI Plugins for Efficient Research Reviews: Hands-on training on integrating AI tools with citation management platforms like Zotero and Mendeley to automate the literature review process, streamline citation tracking, and identify research gaps efficiently

## 2. AI-Driven Manuscript Editing

Enhancing Academic Writing with AI Tools: Practical exposure to using AI-driven tools such as Grammarly and Quillbot to improve academic tone, enhance clarity, and manage references effectively, resulting in polished and publication-ready manuscripts.

## 3. Data Visualization Techniques

Creating Interactive and Publication-Ready Visuals with AI: Training on how to use AI-powered tools like Power BI and Excel Add-ins to create real-time interactive graphs, infographics, and high-quality visuals for research presentations and publications.

## 4. Machine Learning for Data Analysis

Applying Machine Learning in Research Modeling: Gain practical insights into the core concepts of machine learning and how to apply programming languages like Python and R for data analysis, research modeling, and conducting systematic reviews.

## 5. Ethical Use of AI in Research and Emerging Trends

Navigating Ethical AI Use and Future Research Trends: Understand the ethical implications of AI tools like ChatGPT in academic research, including plagiarism detection and responsible use, along with exploring the future impact of AI on academic publishing and research methodologies.

## Pedagogy:

- **Hands-on Workshops**: Practical sessions with AI tools for literature review automation, academic writing, and data visualization.
- **Expert Lectures**: Insights from industry experts and academic leaders on AI trends and research methodologies.
- **Interactive Demonstrations**: Live demonstrations of AI tools for literature management, sentiment analysis, and manuscript editing, data analysis, visualization.
- **Open forums for Q & A and Feedback**: Open forums for questions, clarifications, and personalized guidance.

**Faculty**: The programme would be delivered by subjects matter experts and practitioners from academia and Industry.

**Program dates:** *7th March 2025 (Friday) -8th March 2025 (Saturday) 9:30 PM to 5:30 PM*

## Program Learning Outcomes:

- Gain experience with AI tools for literature review automation, research gap identification, and academic writing using NLP.
- Learn to create data visualizations, apply machine learning for research modeling, and automate meta-analysis.
- Explore ethical AI use in research, including plagiarism detection and bias mitigation.
- Discover AI trends for open science, collaborative research, and academic communication.

## Course Fee (Certificates will be provided to all participants)

- ✓ **Scholars**: Rs. 2500/- (including GST)
- ✓ **Faculty**: Rs. 3500/- (including GST)
- ✓ **Industry Professionals**: Rs. 3500/- (including GST)

**Participants who register at least 15 days prior to the programme commencement will get a 10% Early Bird on the programme fee.**

(*Note: Fee includes a program fee, training fee, and post programme handholding for 1 month. The program is non-residential and will be conducted online. Early bird registrations may also receive priority access to resource materials and exclusive pre-event content.*)

## Program Coordinators

**Dr. Shreya Pal** is an Assistant Professor at the Indian Institute of Plantation Management (IIPMB), Bengaluru, with over 4 years of experience in teaching and research. She holds a PhD in financial economics from the Indian Institute of Technology Kharagpur, an MPhil, and an MBA in Finance. With a strong academic background and extensive experience in educational administration, teaching, and research, her areas of interest include financial, environmental, energy, and Open empirical economics.

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**Dr. Dinesh Jain is** Dinesh Jain is an Associate Professor in Agri- Entrepreneurship, Strategy and General Management at the Indian Institute of Plantation Management, Bengaluru (IIPMB). He holds a Doctorate (FPM) in Food and Agribusiness Management from the Indian Institute of Management Ahmedabad (IIMA). He has a diverse experience of over 16 years in academia working at the Entrepreneurship Development Institute of India, and National Institute of Bank Management (NIBM) Pune. Dr. Jain has conducted numerous training programs, workshops, and conferences for bankers, govt. officials, faculty, and students in areas of Agri-Entrepreneurship, agri-tech Innovations, Business Research Methods, Project Finance, Leadership Development, and related areas.

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