

ATAL Online 6 Day Faculty Development Program on Generative AI and Its Applications



The objective of this six-day Faculty Development Program is to provide participants with an understanding of Generative AI, progressing from the evolution of traditional machine learning to modern generative architectures. The program aims to develop conceptual and practical competence in transformers, prompt engineering, retrieval-augmented generation, diffusion models, vision-language models, Agentic AI, multi-agent systems, and advanced data augmentation. It also seeks to expose participants to hands-on implementation using tools and frameworks. Particular emphasis is placed on real-world deployment concerns, including trust, security, and reliability, enabling faculty members to understand, apply, evaluate, and responsibly integrate Generative AI across academic and professional contexts.

Course Outcome:

Upon successful completion of the FDP, participants will be able to explain the evolution and core principles of Generative AI and distinguish major generative architectures. They will understand transformer-based models, design effective prompts, and develop applications using retrieval-augmented generation. Participants will gain practical exposure to diffusion models, vision-language models, image generation, visual question answering, Agentic AI, and multi-agent systems using LangGraph. They will also understand advanced generative data-augmentation approaches and evaluate deployment challenges related to trust, security, and reliability. The program will enable participants to identify suitable Generative AI techniques and responsibly incorporate them into teaching, research, and professional problem-solving.

Eligibility Criteria

The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel

Registration Fees

No Registration Fees



Coordinator:

Prof. Abhishek Kumar Singh, Dept. of Mathematics and Computing, IIT (ISM) Dhanbad

Co-Coordinator:

Prof. (HAG) Subhashis Chatterjee, Dept. of Mathematics and Computing, IIT (ISM) Dhanbad

Duration of FDP: Oct 26 to Oct 31, 2026

The certificates shall be issued to those participants who are registered on ATAL portal <https://www.aicte.gov.in/atal> and attend the program with minimum 80% attendance and score minimum 70% marks in the test.

Speakers & Hands-on Instructors

- **Mr. Prashant Ghosal**, Head of TPM, Atlassian, USA
- **Prof. Goutam Chakraborty**, Distinguished and Emeritus Professor, Faculty of Software & Information Sc., Iwate Prefectural University, Japan
- **Dr. Subrata Rath**, Head SQC & OR Unit, Indian Statistical Institute, Pune
- **Ms. Moushumi Ghosal**, Principal Technical Program Manager, Atlassian, USA
- **Mr. Vivek Kumar**, Senior Data Science Consultant, Accenture
- **Mr. Pushpendra Kumar Sharma**, Staff Software Engineer (AI), Prodapt Solutions
- **Dr. Saurabh Srivastava**, Assistant Professor, Department of Computer Science & Engineering, IIT (ISM) Dhanbad
- **Mr. Ashutosh Juvele**, Visiting Faculty (Data Analytics), ISI Pune Unit & Software

ATAL Online 6 Day Faculty Development Programme Schedule

FDP Thrust Area: Artificial Intelligence / Generative AI
FDP Title: Generative AI and Its Applications

Start Date: 26 October 2026 End Date: 31 October 2026
Coordinator: Prof. Abhishek Kumar Singh Co-coordinator: Prof. (HAG) Subhashis Chatterjee

Day 1 (Oct 26, 2026)	Day 2 (Oct 27, 2026)	Day 3 (Oct 28, 2026)	Day 4 (Oct 29, 2026)	Day 5 (Oct 30, 2026)	Day 6 (Oct 31, 2026)
6:00 PM to 6:30 PM Inaugural Session	6:00 PM to 7:30 PM Session 3 Topic: The AI Evolution: Bridging Traditional ML with Generative Architecture-II Name of the Expert: Dr. Subrata Rath Designation & Organization: Head, SQC & OR Unit, Indian Statistical Institute, Pune Years of Exp: 40+	6:00 PM to 7:30 PM Session 5 Topic: GenAI and Its Application in Reliability Name of the Expert: Mr. Prashant Ghosal Designation & Organization: Head of TPM, Atlassian; Ex-Group Product Manager, Microsoft, Bellevue, Washington, USA Years of Exp: 30+	6:00 PM to 7:30 PM Session 7 Topic: Navigating Manifold Space: Next-Generation Data Augmentation using Generative AI Name of the Expert: Prof. Goutam Chakraborty Designation & Organization: Distinguished & Emeritus Professor, Faculty of Software & Information Science, Iwate Prefectural University, Japan Years of Exp: 40+	6:00 PM to 7:30 PM Session 9 Topic: GenAI and Its Application in Trust & Security Name of the Expert: Ms. Moushumi Ghosal Designation & Organization: Principal Technical Program Manager, Atlassian; Ex-Microsoft Principal Lead Azure Security, Compute & Networking; Ex- Principal Lead Architect T-Mobile USA Years of Exp: 26+	2:00 PM to 3:30 PM Session 11 Topic: Beyond Text - Diffusion Models and Vision-Language Models Explained Name of the Expert: Mr. Ashutosh Juveale Designation & Organization: Visiting Faculty (Data Analytics), ISI Pune & Software Engineer (ML), Nira Technologies Pty Ltd Years of Exp: 10+
6:30 PM to 8:00 PM Session 1 Topic: Introduction to Gen AI Name of the Expert: Dr. Saurabh Srivastava Designation & Organization: Assistant Professor, Department of CSE, IIT (ISM) Dhanbad Years of Exp: 10+	7:30 PM to 9:00 PM Session 4 Topic: GenAI Foundation: Transformer Architecture and Prompt Engineering Name of the Expert: Mr. Vivek Kumar Designation & Organization: Senior Data Science Consultant, Accenture Years of Exp: 10+	7:30 PM to 9:00 PM Session 6 Topic: Gen AI Application using RAG System Name of the Expert: Mr. Vivek Kumar Designation & Organization: Senior Data Science Consultant, Accenture Years of Exp: 10+	7:30 PM to 9:00 PM Session 8 Topic: Agentic AI - Taxonomy, Design Patterns, and Multi-Agent Architectures Name of the Expert: Mr. Pushpendra Kumar Sharma Designation & Organization: Staff Software Engineer (AI), Prodapt Solutions Years of Exp: 10+	7:30 PM to 9:00 PM Session 10 Topic: Hands-On - Building a Production-Grade Multi-Agent System with LangGraph Name of the Expert: Mr. Pushpendra Kumar Sharma Designation & Organization: Staff Software Engineer (AI), Prodapt Solutions Years of Exp: 10+	3:30 PM to 5:00 PM Session 12 Topic: Hands-On - Image Generation and Visual Q&A in Google Colab Name of the Expert: Mr. Ashutosh Juveale Designation & Organization: Visiting Faculty (Data Analytics), ISI Pune & Software Engineer (ML), Nira Technologies Pty Ltd Years of Exp: 10+
8:00 PM to 9:30 PM Session 2 Topic: The AI Evolution: Bridging Traditional ML with Generative Architecture-I Name of the Expert: Dr. Subrata Rath Designation & Organization: Head, SQC & OR Unit, Indian Statistical Institute, Pune Years of Exp: 40+					5:00 PM to 6:30 PM Session 13 Topic: (i) Drug Use Prevention, Early Identification and Intervention for Substance Use Disorders, (ii) Prompt Engineering Name of the Expert: Dr. Saurabh Srivastava Designation & Organization: Assistant Professor, Department of CSE, IIT (ISM) Dhanbad Years of Exp: 10+
					6:30 PM to 7:30 PM Online Test & Feedback
					7:30 PM to 8:00 PM Valedictory Session