GENERATIVE AI

in collaboration with ST IIT Bombay
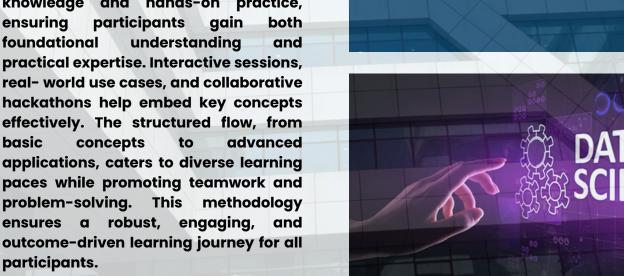
COURSE CURRICULUM

BSATES EdTech Foundation
Section-8 EdTech Company
CIN : U88900DL2024NPL440152

Duration

2 Days

14 Hours of Learning

Venue

Indian Institute of Technology IIT Delhi

Introduction

This workshop has been designed to provide a holistic learning experience. The curriculum balances theoretical knowledge and hands-on practice, ensuring participants gain both foundational understanding and practical expertise. Interactive sessions, real- world use cases, and collaborative hackathons help embed key concepts effectively. The structured flow, from basic concepts to advanced applications, caters to diverse learning paces while promoting teamwork and problem-solving. This methodology ensures a robust, engaging, and outcome-driven learning journey for all participants.

DAY 1: INTRODUCTION & FOUNDATION

Session 1: Introduction to Generative AI

Welcome & Introduction (15 minutes)
Brief overview of workshop agenda and objectives. Set the stage for learning and collaboration.

Topics:

- What is Generative AI?
- Difference between Discriminative and Generative Models
- Types of Generative AI (Text, Image, Audio, Code)
- Overview of tools (ChatGPT, DALL·E, Copilot, etc.)
- Applications in real-world sectors

Session 2: Foundation of Machine Learning & Deep Learning

Topics:

- How LLMs like ChatGPT work (conceptual)
- Prompts and Prompt Engineering basics
- Use cases in content generation, summarization, Q&A
- Live demo: Using ChatGPT for writing, coding, planning

Session 3: Hands on with ChatGpt

Topics

- How LLMs like ChatGPT work (conceptual)
- Prompts and Prompt Engineering basics
- Use cases in content generation, summarization, Q&A
- Live demo: Using ChatGPT for writing, coding, planning

Session 4: Ethics, Safety & Responsible AI

Topics:

- Ethical considerations in Generative AI
- Bias, misinformation, and hallucination issues
- Copyright and plagiarism concerns
- Responsible AI practices and guidelines

Session 5: Wrap up & Reflection

Recap of Day 1 Concepts
Review the day's activities and key learnings.

Q&A Session
Open discussion for clarifications.

Preview of Day 2
Overview of advanced Data Science topics and Machine Learning..

DAY 2: HANDS ON APPLICATIONS & PROJECT BULIDING

Session 1: Generating Images using AI (DALL·E, Midjourney, etc.)

Topics:

- Intro to text-to-image models
- Hands-on with DALL·E or open-source tools
- Prompt crafting for images
- Demo: Creating posters, infographics

Session 2: Generative AI for Code (GitHub Copilot, ChatGPT, Replit)

Topics:

- AI-assisted programming
- Code generation and debugging using ChatGPT & Copilot
- Hands-on: Building a simple Python program with AI help

Session 3: Mini Capstone Project

Topics:

- Participants choose a small project:
  - Content generation (article, blog, or poem)
  - Image poster using DALL·E
  - AI-generated chatbot/script/code
- Guidance and support during project building
- Presentation of selected projects

Session 2: Certification & Feedback

Topics:

- Recap & Q/A
- Certification distribution
- Participant feedback
- Next steps for learning Generative AI

Workshop Outcomes

By the end of the workshop, participants will:

- Understand the fundamentals of Generative AI and its subdomains.
- Gain hands-on experience with popular GenAI tools for text, image, and audio generation.
- Be able to responsibly use Generative AI in academic, creative, and profession contexts.
- Collaborate on a real-world mini project using AI tools.

What Next ?

- Practice Daily Prompting using tools like ChatGPT, Gemini, DALL·E
- DeepLearning.AI's Prompt Engineering Course
- Build Small Projects like chatbots, AI portfolios, resumes
- Join Communities like HuggingFace, Reddit r/GenAI,
- Explore Advanced Areas:
- Fine-tuning LLMs
- Building apps using GenAI APIs