

Gen AI for Data Engineers**Duration – 48 Hours****Program Description**

This program is designed for data engineers to master the integration of Generative AI into data workflows. It covers statistical foundations, machine learning, and deep learning, followed by hands-on experience with NLP, LLM architectures, and deployment strategies.

Participants will gain practical skills in using platforms like OpenAI and Azure ML, and learn to build, fine-tune, and deploy LLM-powered applications.

Learning Outcomes

- Apply statistical and EDA techniques to prepare data for AI models.
- Understand and implement machine learning and deep learning algorithms.
- Work with NLP and generative AI concepts, including prompt engineering.
- Use OpenAI and Azure ML platforms for model development and deployment.
- Build and deploy LLM-based applications tailored to business needs.
- Fine-tune LLMs for domain-specific tasks and optimize performance.

Course Topics

- ❖ Foundations in Data Science and AI
 - ❖ Introduction to Statistics, Probability, and Exploratory Data Analysis (EDA)
 - ❖ Introduction to Machine Learning
 - ❖ Deep Learning Fundamentals
 - ❖ Introduction to Natural Language Processing (NLP)
- ❖ Generative AI Fundamentals
 - ❖ Introduction to Generative AI
 - ❖ Prompt Engineering
 - ❖ Language Models and Diffusion Model Architectures
- ❖ Tools and Platforms
 - ❖ Introduction to OpenAI and Azure ML
 - ❖ Python for AI Development
- ❖ Advanced Applications
 - ❖ Building and Deploying LLM Applications
 - ❖ Fine-tuning and Deploying LLMs