Certificate Program In Generative AI for Software Developers

Duration – 80 Hours

Program Description

This program provides software developers with comprehensive knowledge and practical skills in Generative AI. It covers the foundations of Large Language Models (LLMs), prompt engineering, fine-tuning, and integrating generative AI into real-world software applications. Developers will learn how to build AI-driven applications for diverse use cases such as content generation, automation, data analysis, and customer engagement.

Learning Goals

- Understand the principles and architecture of Generative AI models
- Gain expertise in prompt engineering and fine-tuning for custom tasks
- Learn how to build and deploy AI-powered applications across domains
- Explore multimodal Generative AI (text, images, code, and structured data)
- Acquire hands-on skills in integrating Generative AI APIs into software stacks
- Apply best practices for ethical, explainable, and responsible AI usage
- Demonstrate knowledge through a capstone project on a real-world use case

Course Topics

- Introduction to Generative AI and Applications Across Industries
- Foundations of LLMs – Transformers, Training & Fine-Tuning
- Prompt Engineering and Customization Techniques
- Generative AI for Text, Image, Code, and Data Applications
- Multimodal AI – Combining Text, Vision, and Data
- Deploying and Integrating Generative AI Models into Applications
- Using APIs and Frameworks (OpenAI, Hugging Face, LangChain, etc.)
- Ethical & Responsible AI Practices
- Capstone Project: Build an End-to-End Generative AI Application