Enterprise Generative AI Developed Training Program

Course Overview

The GenAI program is designed to introduce GenAI to software developers. This course focuses on practical applications of AI-driven tools, enabling developers to enhance productivity, automate code generation, and build AI-powered applications.This curriculum will cover foundational concepts, industry-leading AI models, and real-world implementations, integrating AI solutions into workflows. The ecosystem of GenAI tools and concepts needed for GenAI based development like RAG, CAG, VectorDB, Langchain etc would be covered.

The course will cover ethical AI usage, security considerations, and best practices for responsible AI development. While the course will cover the concepts of finetuning, creation of LLMs from scratch is outside the scope.

Who will benefit from our Enterprise Advanced Generative AI Developer Training Program?

All the engineers and developers working in complex business environments can benefit with our hands-on and enterprise-grade program, that perfectly aligns with their practical needs.

- Software Engineers & AI Practitioners upskilling in AI development
- CTOs & Tech Leaders driving enterprise AI adoption
- Data Scientists & ML Engineers working on AI integration
- Product & Engineering Teams building AI-driven applications
- New AI Engineer hirings

Prerequisites for the Enterprise Advanced Generative AI Developer Training Program

The prerequisites for enrolling in the Generative AI Developer Training Program typically include a basic understanding of Python programming, familiarity with machine learning concepts, and experience working with APIs and cloud platforms (for deployment). Since it is a hands-on course, and trainers are there to support, there should be no reluctance or fear of trying out the concepts in practice.

Duration & Mode

Duration : 8-12 weeks (customizable for corporate needs)
Mode : Live Online / In-Person / Hybrid (as per corporate preference)
Hands-on Learning : Hands-on, Project based learning

Detailed Course Curriculum

Module 1: Introduction to Generative AI
- Overview of AI and Machine Learning
- Evolution of Generative AI, Attention
- Key Concepts: NLP, Deep Learning, Transformers
- Applications of Generative AI in Software Development

Module 2: Foundations of Generative Models
- Neural Networks & Deep Learning Basics
- Introduction to Autoencoders and GANs
- Transformers & Attention Mechanism
- Large Language Models (LLMs): GPT, BERT, T5, Claude, Mistral

Module 3: Hands-on with Generative AI Tools
- OpenAI GPT (ChatGPT)
- Google Gemini AI
- Hugging Face Transformers
- LLM models on Cloud(AWS + Anthropic)
- LangChain and Prompt Engineering

Lab 1: Hands-on with Generative AI Tools
- Create OpenAI setup
- Create Langchain setup

Module 4: Generative AI for Code Generation
- AI-Powered Code Assistants (GitHub Copilot, Tabnine, Llama coder)
- AI for Code Refactoring & Debugging
- Automating Documentation with AI
- Best Practices & Limitations

Lab 2: Generative AI for Code Generation
- Configure Llama on IDE and show code generation, refactoring and documentation

Module 5: Building AI-Powered Applications
- Integrating Generative AI in Software Development
- Introduction to Langchain, RAG, CAG, chaining and output parsers
- Handling Long Contexts with Memory
- External data sources and using Vector Databases for Contextual Awareness
- Implementing RAG with LangChain and Vector Stores (FAISS, Pinecone, ChromaDB)
- Using APIs for AI-Generated Content
- Developing AI Chatbots & Virtual Assistants
- Case Studies: AI-Powered Apps

Lab 3: Building AI-Powered Applications
- Simple demo for concepts of chaining, output parsers
- Create an app to use RAG and VectorDB

Module 6: Integrating External sources and AgenticAI
- Connecting LangChain to External APIs (Google Search, etc.)
- Introduction to concept of Agent

Lab 4: Automate workflows
- Create an app to automate a workflow

Module 6: Ethical Considerations & Challenges
- Bias & Fairness in Generative AI
- Data Privacy & Security Concerns
- AI Regulation & Compliance
- Responsible AI Development

Module 7: Advanced Topics & Future Trends
- Fine-tuning LLMs for Custom Applications
- Multi-modal AI (Text, Image, Audio)
- AI in DevOps & Automation
- Future of Generative AI in Software Engineering

Key Learning Takeaways from our Enterprise Advanced Generative AI Developer Training Program

It is safe to say that Generative AI is the future in near to mid term. In this customizable AI training program you will learn about:

1. **Advanced AI models and frameworks** – With hands-on labs, real-world scenarios, and advanced AI models and frameworks. It aligns with the practical needs of engineers and developers working in complex business environments.

2. **Ethical AI design, bias detection & data privacy protocols** - supports AI governance, security, and compliance by integrating best practices into its curriculum, including ethical AI design, bias detection, model explainability, and data privacy protocols.

3. **Cutting-edge skills, practical tools & industry-aligned best practices** – The Generative AI Developer Training Program helps enterprise teams stay ahead in AI adoption by equipping them with cutting-edge skills, practical tools, and industry-aligned best practices for building and scaling generative AI solutions.

4. **Audit trails, access controls & monitoring tools** - this course trains participants on how to implement audit trails, access controls, and monitoring tools to ensure responsible AI usage.

5. **Industry standards & regulations** - compliance with industry standards and regulations such as GDPR and HIPAA, equipping learners to build and deploy AI solutions that are not only effective but also secure, transparent, and aligned with enterprise and legal requirements.

6. **latest models, frameworks & deployment strategies** – Ensures teams are trained on the latest models, frameworks, and deployment strategies, while also emphasizing responsible AI, governance, and integration with business systems