

Developing Generative AI Applications on AWS (DGAIA)

ID DGAIA Price on request Duration 2 days

Who should attend

This course is intended for:

- Software developers interested in using LLMs without fine-tuning

Prerequisites

We recommend that attendees of this course have:

- Completed [AWS Technical Essentials \(AWSE\)](#)
- Intermediate-level proficiency in Python

Course Objectives

In this course, you will learn to:

- Describe generative AI and how it aligns to machine learning
- Define the importance of generative AI and explain its potential risks and benefits
- Identify business value from generative AI use cases
- Discuss the technical foundations and key terminology for generative AI
- Explain the steps for planning a generative AI project
- Identify some of the risks and mitigations when using generative AI
- Understand how Amazon Bedrock works
- Familiarize yourself with basic concepts of Amazon Bedrock
- Recognize the benefits of Amazon Bedrock
- List typical use cases for Amazon Bedrock
- Describe the typical architecture associated with an Amazon Bedrock solution
- Understand the cost structure of Amazon Bedrock
- Implement a demonstration of Amazon Bedrock in the AWS Management Console
- Define prompt engineering and apply general best practices when interacting with foundation models (FMs)
- Identify the basic types of prompt techniques, including zero-shot and few-shot learning
- Apply advanced prompt techniques when necessary for your use case

- Identify which prompt techniques are best suited for specific models
- Identify potential prompt misuses
- Analyze potential bias in FM responses and design prompts that mitigate that bias
- Identify the components of a generative AI application and how to customize an FM
- Describe Amazon Bedrock foundation models, inference parameters, and key Amazon Bedrock APIs
- Identify Amazon Web Services (AWS) offerings that help with monitoring, securing, and governing your Amazon Bedrock applications
- Describe how to integrate LangChain with LLMs, prompt templates, chains, chat models, text embeddings models, document loaders, retrievers, and Agents for Amazon Bedrock
- Describe architecture patterns that you can implement with Amazon Bedrock for building generative AI applications
- Apply the concepts to build and test sample use cases that use the various Amazon Bedrock models, LangChain, and the Retrieval Augmented Generation (RAG) approach

Course Content

- Introduction to Generative AI – Art of the Possible
- Planning a Generative AI Project
- Getting Started with Amazon Bedrock
- Foundations of Prompt Engineering
- Amazon Bedrock Application Components
- Amazon Bedrock Foundation Models
- LangChain
- Architecture Patterns



Training Centres worldwide



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