

# AWS Certified AI - Practitioner

This course provides a comprehensive introduction to Generative AI on AWS. It covers foundation models, Amazon Bedrock, prompt engineering, RAG, Amazon Q, machine learning fundamentals, SageMaker, MLOps, managed AI services, responsible AI, and security, governance, and compliance concepts with demos and exam-focused guidance.

## Program Duration

9 Hours

## Learning Format

Online and On-demand

## Course Curriculum

### AWS Certified AI - Practitioner

#### Lesson 01: Introduction

#### Lesson 02: Basics of Generative AI

#### Lesson 03: Gen AI on AWS - Amazon Bedrock

- 3.01 Types of Foundation Models
- 3.02 Business Metrics for Generative AI
- 3.03 Amazon Bedrock - Overview
- 3.04 Amazon Bedrock - Demo
- 3.05 Foundation Models on Amazon Bedrock - How to Choose ?
- 3.06 Finetuning Foundation Models
- 3.07 Evaluation Metrics of Foundation models
- 3.08 Amazon Bedrock - Evaluation - Demo
- 3.09 Understanding RAG Architecture of LLM
- 3.10 AWS Services for Storage of Vector Embeddings
- 3.11 Amazon Bedrock RAG & Knowledge Base - Demo
- 3.12 Amazon Bedrock - GuardRails
- 3.13 Amazon Bedrock - GuardRails - Demo
- 3.14 Amazon Bedrock Agents
- 3.15 Amazon Bedrock Integrations - Cloudwatch - S3
- 3.16 PartyRock - Amazon Bedrock Playground
- 3.17 Amazon Bedrock - Pricing

#### Lesson 04: Prompt Engineering

- 4.01 Prompt Engineering
- 4.02 Prompt Engineering - Demo
- 4.03 Fundamentals of Prompt Design
- 4.04 Techniques for Effective Prompts
- 4.05 Techniques for Effective Prompts - Demo
- 4.06 Parameter Efficient Finetuning Technique
- 4.07 Prompt Learning: P-tuning
- 4.08 A/B Testing

## Lesson 05: Amazon Q - AI Powered Assistant

- 5.01 What is Amazon Q Business
- 5.02 Amazon Q Apps
- 5.03 Amazon Q Developer

## Lesson 06: Fundamentals of AI & ML

- 6.01 What is Machine Learning ?
- 6.02 Understanding difference - AI Vs Deep Learning Vs Machine Learning
- 6.03 Types of Data
- 6.04 Types of Machine Learning
- 6.05 Example Use Cases to Identify the Machine Learning Use Case
- 6.06 AWS Services for Machine Learning
- 6.07 Steps for Machine Learning
- 6.08 Classification task - Demo
- 6.09 Model Selection, Training and Evaluation
- 6.10 Data Preprocessing Essentials
- 6.11 Evaluating Classification Models
- 6.12 Confusion Matrix
- 6.13 Examples of Interpretation of Confusion Matrix
- 6.14 Evaluation Metrics - Regression
- 6.15 Unsupervised Learning - Clustering
- 6.16 Types of Inferencing - When to Use What ?
- 6.17 What is Deep Learning ?
- 6.18 Usage of Deep Learning/ ML models in Production

## Lesson 07: Amazon Sagemaker

- 7.01 Introduction to Amazon Sagemaker
- 7.02 Amazon Sagemaker - Demo
- 7.03 Amazon Sagemaker Data Wrangler - Deep Dive
- 7.04 Amazon Sagemaker Feature Store - Deep Dive
- 7.05 Amazon Sagemaker Model Monitor - Deep Dive
- 7.06 Amazon Sagemaker Jumpstart

## Lesson 08: Foundations of MLOPs

- 8.01 What is MLOps ?
- 8.02 AWS Services for MLOps

## Lesson 09: AWS Managed AI Services

- 9.01 Amazon Comprehend
- 9.02 Amazon Comprehend - Demo
- 9.03 Amazon Translate
- 9.04 Amazon Translate - Demo
- 9.05 Amazon Transcribe
- 9.06 Amazon Transcribe - Demo
- 9.07 Amazon Polly
- 9.08 Amazon Polly - Demo
- 9.09 Amazon Rekognition
- 9.10 Amazon Rekognition - Demo
- 9.11 Amazon Lex

- 9.12 Amazon Lex - Demo
- 9.13 Amazon Kendra
- 9.14 Amazon Mechanical Turk
- 9.15 Amazon Augmented AI (A2I)
- 9.16 Amazon Personalize
- 9.17 Amazon Textract

Lesson 10: Responsible AI

Lesson 11: Security, Compliance, and Governance for AI Solutions

Lesson 12: Before you Appear for Examination

## 5+ Skills Covered

- Generative AI
- Amazon Bedrock
- Prompt Engineering
- Machine Learning Basics
- Responsible AI