

AWS Certified AI Practitioner (AIF-C01)

Make AI work for you with this AWS Certified AI Practitioner course (AIF-C01), designed for beginners, business leaders, data analysts, and aspiring machine learning engineers. You'll build a strong foundation in the fundamentals of artificial intelligence and machine learning, using AWS services like SageMaker, Bedrock, Comprehend, Rekognition, Lex, and more. Through instructor-led modules and real-world scenarios, you'll learn prompt engineering, model evaluation, and responsible AI practices so non-technical teams can confidently guide AI initiatives and adoption. Aligned with AWS's five exam domains (AI/ML logic, generative AI, foundation models, ethical AI, and security/governance) you'll be fully prepared to pass the AIF-C01 exam and earn a valuable machine learning certification.

[CBT Nuggets course material](#) →

WEEK 1

Explore AWS and Cloud Computing Architecture

The Internet, Servers, and You
From Garages to the Cloud
Cloud Models, Benefits, and Costs
What is AWS Used For?
Challenge ☒
Solution

Explore Core Artificial Intelligence Concepts

Introduction
Data Science Tools & Environments
What Is Artificial Intelligence?
A Brief History Of AI
AI Use Cases Across Industries
AI Today
Challenge ☒
Solution

Compare AI Vs. Machine Learning

Introduction
AI vs Machine Learning
What is Machine Learning?
Deep Learning Explained Simply
Recognizing Handwritten Digits
What is Generative AI?
Challenge ☒
Solution

Compare Supervised and Unsupervised Learning

Introduction

Comparing Data Types

What is Supervised Learning?

What is Feature Engineering?

What is Unsupervised Learning?

Other Kinds of Learning

Challenge ☒

Solution

Use Performance Metrics and Phases of ML Workflows

Introduction

What is Reinforcement Learning (RL)?

What is Reinforcement Learning with Human Feedback (RLHF)?

What is Model Fit?

Binary & Multi-class Classification Metrics

What is Area Under the ROC?

Machine Learning Project Phases

CHALLENGE ☒

Examine Foundational Generative AI Concepts

Introduction

What is GenAI (Deep Dive)?

How Do We Interact With Generative Language Models?

How Does GenAI Generate Text From Images?

What is Amazon Bedrock?

Fine-Tuning a Model with Amazon Bedrock

Challenge ☒

Apply Generative AI Concepts with Amazon Bedrock

Introduction

What is Amazon Bedrock?

Enabling Models for Amazon Bedrock

Fine-Tuning Models in Amazon Bedrock

Model Evaluation Overview

Model Evaluation in Amazon Bedrock

Using RAG with a Knowledge Base

Challenge ☒

Build a RAG App & Explore Safety Tools

Introduction

Build a RAG Application with Amazon Bedrock

Tokenization, Vectors, and Databases

Understanding Embedding and Context Windows

Build Safe Interactions with Guardrails

Amazon Bedrock AI Agents

Monitoring Amazon Bedrock with CloudWatch

Pricing with Amazon Bedrock

☒☒ Cost Warning

Challenge ☒

Solution

WEEK 2

WEEK 3

Identify Core Prompt Engineering Concepts

Introduction

Prompt Engineering for Model Optimization

Amazon Bedrock Enhanced Prompts Monitoring

Negative Prompting for Output Control

Controlling Outputs with Prompt Parameters

What Determines Prompt Latency?

Prompt Templates, Security, and Guardrails

Challenge ☒

Examine Core Amazon Q Applications

Introduction

What is Amazon Q?

Amazon Q Business Example

Amazon Q App Creator

Amazon Q Developer

Amazon Q Developer

WEEK 4

Amazon Q in QuickSight

Challenge ☒

Solution

Explore Foundational Amazon SageMaker Concepts

Introduction

What is Amazon SageMaker AI?

SageMaker AI Studio Overview

Asynchronous and Batch Inference Types

Google Colab Vs. Amazon SageMaker AI Studio Lab

Amazon SageMaker Data Wrangler

Challenge ☒

Examine Amazon SageMaker AI Tools and Governance

Introduction

Tour of Amazon SageMaker AI in AWS

SageMaker AI Tools

SageMaker AI Tools

SageMaker AI Governance

SageMaker AI Model Dashboard & Monitor

SageMaker AI Pipelines & Core Tools

Challenge ☒

Compare AWS Managed AI Language Services

Introduction

Amazon Comprehend

Amazon Comprehend AWS Walk-Through

Amazon Translate

Amazon Translate AWS Walk-Through

Challenge ☒

Solution

WEEK 5

Explore AWS Managed AI Speech & Vision Services

Introduction

Amazon Transcribe Concepts

Amazon Transcribe in AWS

Amazon Polly Concepts

Amazon Polly in AWS

Amazon Rekognition Concepts

Amazon Rekognition in AWS

Challenge ☒

Explore AWS Managed AI Engagement Services

Introduction

Amazon Lex

Amazon Lex Walk-Through

Amazon Personalize

Amazon Personalize Walk-Through

Amazon Textract Concepts & Walk-Through

Amazon Kendra

Challenge ☒

Examine AWS Managed AI Infrastructure Services

Introduction

Amazon Mechanical Turk

Amazon A2I

Amazon Comprehend & Transcribe Medical

EC2 & Amazon's AI-Optimized Hardware

Challenge ☒

Solution

Describe Principles Responsible for AI Governance

Introduction

Responsible AI

Responsible AI

WEEK 6

AI Service Cards & Model Interpretability

Explainability and Human-Centered Design

AI Compliance Challenges

Challenge ☒

Apply Generative AI Security Best Practices

GenAI Challenges and Capabilities

Mitigating Toxic Content in GenAI

Hallucinations in GenAI

Plagiarism and Academic Cheating

Links

Data Poisoning, Prompt Injection, Exposure, and Data Leaks

Jailbreaking and GenAI Security Scope

Challenge ☒

Apply Tools to Evaluate Fairness in AI Models

Introduction

Model Cards

AWS Governance Tools

Building AI Governance Strategies and Capabilities

Data Lineage, Security, and Monitoring

Shared Responsibility, Data Engineering, ML Phases, & MLOps

Challenge ☒