Exam Readiness: AWS Certified Machine Learning - Specialty

AWS Classroom Training

Course description

The AWS Certified Machine Learning – Specialty exam validates your ability to design, implement, deploy, and maintain Machine Learning (ML) solutions for given business problems. Join this half-day, advancedlevel training to learn how to prepare for the exam by exploring the exam's topic areas including data engineering, exploratory data analysis, modeling, and machine learning implementation and operations. The course reviews how to interpret exam questions in each topic area and teaches you how to apply the concepts being tested so that you can more easily eliminate incorrect responses.

Topics in the course will address each of the exam's four subject domains: 1) Data Engineering, 2) Exploratory Data Analysis, 3) Modeling, and 4) Machine Learning Implementation and Operations.

- Course level: Advanced
- Duration: Half day

Activities

This course includes instructor lecture, presentations, a question walkthrough, and quizzes.

Course objectives

In this course, you will:

- Identify your strengths and weaknesses in each of the exam domains.
- Create a subsequent study plan to prepare for the exam.
- Describe the technical topics and concepts making up each of the exam domains.
- Summarize the logistics and mechanics of the certification exam and its questions.
- Identify effective test taking strategies that can be used to answer exam questions

Intended audience

This course is intended for:

- Machine learning practitioners who are preparing to take the AWS Certified Machine Learning - Specialty exam

Prerequisites

We recommend that attendees of this course have:

- 1-2 years of hands-on experience developing, architecting, or running ML/deep learning workloads on the AWS cloud
- Proficiency expressing the intuition behind basic machine learning algorithms and performing basic hyperparameter optimization
- Understanding of the machine learning pipeline and its components
- Experience with machine learning and deep learning frameworks
- Understanding of and experience in model training, deployment and operational best practices

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Course outline

Module 0: Course Introduction

Module 1: Exam Overview and Test-taking Strategies

- Testing center information and expectations
- Exam overview and structure
- Content domains and question breakdown
- Topics and concepts within content domains
- Question structure and interpretation techniques
- Practice exam questions

Module 2: Domain 1 - Data Engineering

- Domain 1.1: Data Repositories for machine learning
- Domain 1.2: Identify and implement a data-ingestion solution
- Domain 1.3: Identify and implement a data-transformation solution
- Walkthrough of study questions
- Domain 1 quiz

Module 3: Domain 2 - Exploratory Data Analysis

- Domain 2.1: Sanitize and prepare data for modeling
- Domain 2.2: Perform featuring engineering
- Domain 2.3: Analyze and visualize data for ML Walkthrough of study questions
- Domain 2 quiz

Module 4: Domain 3 - Modeling

- Domain 3.1: Frame business problems as machine learning (ML) problems
- Domain 3.2: Select the appropriate model(s) for a given ML problem
- Domain 3.3: Train ML models
- Domain 3.4 Perform hyperparameter optimization
- Domain 3.5 Evaluate ML models
- Walkthrough of study questions
- Domain 3 quiz

Module 5: Domain 4 - ML Implementation and Operations

- Domain 4.1: Build ML solutions for performance, availability, scalability, resiliency, and fault tolerance
- Domain 4.2: Recommend and implement the appropriate ML services and features for a given problem
- Domain 4.3: Apply basic AWS security practices to ML solutions
- Domain 4.4: Deploy and operationalize ML solutions
- Walkthrough of study questions
- Domain 4 quiz

Module 6: Comprehensive Study Questions

Module 7: Study Material

Module 8: Wrap-up