Machine Learning Engineer on AWS

Course Duration: 3 Days
Exam Reference: Machine Learning Engineer on AWS-Associate

Course Overview

Machine Learning (ML) Engineering on Amazon Web Services (AWS) is a 3-day intermediate course designed for ML professionals seeking to learn machine learning engineering on AWS. Participants learn to build, deploy, orchestrate, and operationalize ML solutions at scale through a balanced combination of theory, practical labs, and activities. Participants will gain practical experience using AWS services such as Amazon SageMaker AI and analytics tools such as Amazon EMR to develop robust, scalable, and production-ready machine learning applications.

Prerequisites

We recommend that attendees of this course have the following:

- Familiarity with basic machine learning concepts
- Working knowledge of Python programming language and common data science libraries such as NumPy, Pandas, and Scikit-learn
- Basic understanding of cloud computing concepts and familiarity with AWS
- Experience with version control systems such as Git (beneficial but not required)

Course Objectives

In this course, you will learn to do the following:

- Explain ML fundamentals and its applications in the AWS Cloud.
- Process, transform, and engineer data for ML tasks by using AWS services.
- Select appropriate ML algorithms and modeling approaches based on problem requirements and model interpretability.
- Design and implement scalable ML pipelines by using AWS services for model training, deployment, and orchestration.

APPLIED TECHNOLOGY ACADEMY

Contact Us

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- Create automated continuous integration and delivery (CI/CD) pipelines for ML workflows.
- Discuss appropriate security measures for ML resources on AWS.
- Implement monitoring strategies for deployed ML models, including techniques for detecting data drift.

Course Outline

Day 1

- Module 0: Course Introduction
- Module 1: Introduction to Machine Learning (ML) on AWS
- Module 2: Analyzing Machine Learning (ML) Challenges
- Module 3: Data Processing for Machine Learning (ML)
- Module 4: Data Transformation and Feature Engineering

Day 2

- Module 5: Choosing a Modeling Approach
- Module 6: Training Machine Learning (ML) Models
- Module 7: Evaluating and Tuning Machine Learning (ML) models
- Module 8: Model Deployment Strategies

Day 3

- Module 9: Securing AWS Machine Learning (ML) Resources
- Module 10: Machine Learning Operations (MLOps) and Automated Deployment
- with Amazon SageMaker Studio
- Module 11: Monitoring Model Performance and Data Quality
- Module 12: Course Wrap-up