uCertify

Course Outline

AWS Certified Machine Learning Study Guide: Specialty (MLS-C01)

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1. Course Objective

2. Pre-Assessment

3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions

4. Expert Instructor-Led Training

5. ADA Compliant & JAWS Compatible Platform

6. State of the Art Educator Tools

7. Award Winning Learning Platform (LMS)

8. Chapter & Lessons

   Syllabus

   Chapter 1: Introduction

   Chapter 2: AWS AI ML Stack

   Chapter 3: Supporting Services from the AWS Stack

   Chapter 4: Business Understanding

   Chapter 5: Framing a Machine Learning Problem

   Chapter 6: Data Collection

   Chapter 7: Data Preparation

   Chapter 8: Feature Engineering

   Chapter 9: Model Training

   Chapter 10: Model Evaluation

   Chapter 11: Model Deployment and Inference

   Chapter 12: Application Integration

   Chapter 13: Operational Excellence Pillar for ML

   Chapter 14: Security Pillar

   Chapter 15: Reliability Pillar

   Chapter 16: Performance Efficiency Pillar for ML

   Chapter 17: Cost Optimization Pillar for ML

   Chapter 18: Recent Updates in the AWS AI/ML Stack

1. 📖 Course Objective

Gain the skills required to pass the AWS ML specialty exam with the AWS Certified Machine Learning Study Guide: Specialty (MLS-C01) course and lab. The lab provides a hands-on learning experience of machine learning in a safe, online environment. The purpose of this course is for you to understand the concepts and principles behind ML, with the practical goal of passing the AWS Certified Machine Learning Specialty exam. This course is intended for professionals who perform a data science, machine learning engineer role.

2. 📋 Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

3. ⊕ Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.

259

EXERCISES

4. ⏱ Quiz

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

168
QUIZ

5. ⚡ flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.

188
FLASHCARDS

6. 📖 Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

89
GLOSSARY OF TERMS

7. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

8. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

9. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

10. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been

recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution
    2. Best Virtual Learning Solution
    3. Best Student Assessment Solution
    4. Best Postsecondary Learning Solution
    5. Best Career and Workforce Readiness Solution
    6. Best Instructional Solution in Other Curriculum Areas
    7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform

2. Best Instructional Solution in Other Curriculum Areas

3. Best Learning Relationship Management Solution

- **2019**

1. Best Virtual Learning Solution

2. Best Content Authoring Development or Curation Solution

3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution

2. Best Cross-Curricular Solution

3. Best Virtual Learning Solution

11. ⚙ Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Introduction

- The AWS Certified Machine Learning Specialty Exam

- Study Guide Features

- AWS Certified Machine Learning Specialty Exam Objectives

Chapter 2: AWS AI ML Stack

- Amazon Rekognition

- Amazon Textract

- Amazon Transcribe

- Amazon Translate

- Amazon Polly

- Amazon Lex

- Amazon Kendra

- Amazon Personalize

- Amazon Forecast

- Amazon Comprehend

- Amazon CodeGuru

- Amazon Augmented AI

- Amazon SageMaker

- AWS Machine Learning Devices

- Summary

- Exam Essentials

Chapter 3: Supporting Services from the AWS Stack

- Storage

- Amazon VPC

- AWS Lambda

- AWS Step Functions

- AWS RoboMaker

- Summary

- Exam Essentials

Chapter 4: Business Understanding

- Phases of ML Workloads

- Business Problem Identification

- Summary

- Exam Essentials

Chapter 5: Framing a Machine Learning Problem

- ML Problem Framing

- Recommended Practices

- Summary

- Exam Essentials

Chapter 6: Data Collection

- Basic Data Concepts

- Data Repositories

- Data Migration to AWS

- Summary

- Exam Essentials

Chapter 7: Data Preparation

- Data Preparation Tools

- Summary

- Exam Essentials

Chapter 8: Feature Engineering

- Feature Engineering Concepts

- Feature Engineering Tools on AWS

- Summary

- Exam Essentials

Chapter 9: Model Training

- Common ML Algorithms

- Local Training and Testing

- Remote Training

- Distributed Training

- Monitoring Training Jobs

- Debugging Training Jobs

- Hyperparameter Optimization

- Summary

- Exam Essentials

Chapter 10: Model Evaluation

- Experiment Management

- Metrics and Visualization

- Summary

- Exam Essentials

Chapter 11: Model Deployment and Inference

- Deployment for AI Services

- Deployment for Amazon SageMaker

- Advanced Deployment Topics

- Summary

- Exam Essentials

Chapter 12: Application Integration

- Integration with On-Premises Systems

- Integration with Cloud Systems

- Integration with Front-End Systems

- Summary

- Exam Essentials

Chapter 13: Operational Excellence Pillar for ML

- Operational Excellence on AWS

- Summary

- Exam Essentials

Chapter 17: Cost Optimization Pillar for ML

- Common Design Principles

- Cost Optimization for ML Workloads

- Summary

- Exam Essentials

Chapter 18: Recent Updates in the AWS AI/ML Stack

- New Services and Features Related to AI Services

- New Features Related to Amazon SageMaker

- Summary

- Exam Essentials

12. ⊚ Practice Test

Here's what you get

50	**2**	**55**
PRE-ASSESSMENTS QUESTIONS	**FULL LENGTH TESTS**	**POST-ASSESSMENTS QUESTIONS**

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

13. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

AWS AI ML Stack

- Detecting Objects in an Image
- Using Amazon Translate
- Using Amazon Transcribe and Polly
- Using Amazon SageMaker

Supporting Services from the AWS Stack

- Creating an AWS Lambda Function
- Using Step Functions

Data Collection

- Creating an Amazon DynamoDB Table
- Creating a Kinesis Firehose Delivery Stream

Data Preparation

- Using Amazon Athena
- Using AWS Glue

Model Training

- Performing the K-Means Clustering
- Creating Amazon EventBridge Rules that React to Events
- Creating a CloudWatch Dashboard and Adding a Metric to it
- Creating CloudTrail

Model Deployment and Inference

- Deploying an ML Model Using AWS SageMaker

Application Integration

- Creating an AWS Backup
- Creating a Model

Operational Excellence Pillar for ML

- Enabling Versioning in the Amazon S3 Bucket

Security Pillar

- Using Amazon EC2
- Configuring a Key
- Using Amazon SageMaker Notebook Instance
- Attaching an AWS IAM Role to an Instance

Reliability Pillar

- Understanding Production Security
- Creating an Auto Scaling Group

Performance Efficiency Pillar for ML

- Creating an Amazon EFS

Recent Updates in the AWS AI/ML Stack

- Creating an Amazon Redshift Cluster

Here's what you get

26	**28**	**01:08**
LIVE LABS	VIDEO TUTORIALS	HOURS

14. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

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