

Machine Learning Course

#machinelearning

Welcome / Intro

Hello WhizLabers and welcome to the AWS Machine Learning Specialty Exam Certification course (pic of the AWS cert map with ML highlighted)

1

This course will give you a foundational understanding of Machine Learning on AWS

If you have experience with Machine Learning, Big Data, or experience with other machine learning platforms, this course will teach you the services and methods that you can use to build AWS powered solutions (pic of AWS Certified Machine Learning - Specialty page)

2

In this course you'll learn about data engineering, data analysis, model design, algorithm selection, model optimization, and model implementation on the AWS platform (pic of Content Outline from exam guide)

3

We cover SageMaker, Kinesis, Glue, and the other AWS services that work together to create the very powerful AWS machine learning platform (show [draw.io](#) diagram that progressively grows the services)

4

If you are preparing for the AWS certified machine learning specialty exam, this course will help you pass the exam with confidence (show pic of sample questions)

5

Based on the exam blueprint, this course will cover all the subjects you'll be tested on in the exam (create [draw.io](#) of the sections in a box/arrow diagram)

6

This course assumes you have at least two years hands on experience with the AWS platform, and that you also have some experience with machine learning concepts and algorithms (show the recommended AWS knowledge section of the exam guide)

7

You should also have at least one AWS Associate certification, such as the Architect or Developer associate certifications. This will give you the baseline knowledge needed to

8

benefit from this course (same as above)

Machine Learning is one of the most exciting areas in the IT industry right now and opportunities for Machine Learning specialists are everywhere! (Show quote from CIO magazine)

Take this course and crush the certification exam and then go out and take advantage of all of the great opportunities available to you! (show a pic of ML graphic)

OK, let's get started on our journey!

Outline of the Course

In this course we'll cover all of the topics on the exam blueprint (show the blueprint)

We'll start with the basics by covering foundational Machine Learning terminology.

Then we'll get started with Data Engineering, including basic data engineering concepts and terminology, creating data repositories for machine learning, identifying and implementing data-ingestion and data-transformation solutions, and AWS data migration services and tools.

Next up we'll cover Exploratory Data Analysis, including data analysis concepts, Kinesis Data Streams, Firehose, and Video Streams, Kinesis Data Analytics, how to sanitize and prepare your data for modeling, how to perform feature engineering, as well as how to visualize data for machine learning

Next we'll cover one of the foundational concepts of machine learning, modeling. In this section we'll cover how to select the appropriate model or models for a given machine learning problem, how to train your machine learning models, how to tune and optimize the hyperparameters of your models, and how to evaluate the effectiveness of your models

We'll then cover all of the algorithms you can use in your AWS machine learning experience. We'll review basic algorithm concepts, then we'll cover the types of

algorithms: regression, clustering, classification, image analysis, anomaly detection, text analysis, reinforcement learning, and forecasting

We'll finish out the main content of the course with our Machine Learning Implementation and Operations section. In this section we'll cover modeling concepts, building machine learning solutions that are performant available scaleable resilient and fault tolerant, recommending and implementing the appropriate machine learning services and features for a given problem, applying AWS security best practices to your machine learning solutions, and deploying and operationalizing your machine learning solutions

Finally, we'll finish out with a course summary and exam day details and tips

At the end of each section of the course we'll have a brief quiz to help you internalize the course material.

If the terms and concepts I've covered in this section aren't all familiar to you, don't worry. We'll cover all of these terms and concepts in detail throughout the course, so you'll have these terms and concepts firmly within your grasp by the end of the course.