



THE MACHINE LEARNING PIPELINE ON AWS CERTIFICATION TRAINING



Course Level:

Intermediate

Course Duration:

4 Days

Course Overview:

This Machine Learning Pipeline on AWS course from CloudThat teaches candidates how to use the iterative machine learning (ML) process pipeline to solve a real business problem in a project-based learning environment. Candidates taking up this Machine Learning Pipeline on AWS training also learn to solve one of three business problems, including recommendation engines, fraud detection, or flight delays.

By the end of the Machine Learning Pipeline AWS training and certification course, candidates are successfully trained to build, evaluate, tune, and deploy an ML model using Amazon SageMaker. Candidates with basic knowledge of Statistics will find this course helpful. This course comprises presentations, group exercises, demonstrations, and hands-on labs.



Prerequisites

We recommend that attendees of this Machine Learning Pipeline on AWS course must have:

1. Basic knowledge of Python programming language
2. Basic understanding of AWS Cloud infrastructure (Amazon S3 and Amazon CloudWatch)
3. Basic experience working in a Jupyter notebook environment

Objectives



Select and justify the appropriate ML approach for a given business problem



Use the ML pipeline to solve a specific business problem



Train, evaluate, deploy, and tune an ML model using Amazon SageMaker



Describe some of the best practices for designing scalable, cost-optimized, and secure ML pipelines in AWS



Apply machine learning to a real-life business problem after the course is complete

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Course Outline

Day 1

Module 0: Introduction

- Pre-assessment

Module 1: Introduction to Machine Learning and the ML Pipeline

- Overview of machine learning, including use cases, types of machine learning, and key concepts
- Overview of the ML pipeline
- Introduction to course projects and approach

Module 2: Introduction to Amazon SageMaker

- Introduction to Amazon SageMaker
- Demo: Amazon SageMaker and Jupyter notebooks
- Hands-on: Amazon SageMaker and Jupyter notebooks

Module 3: Problem Formulation

- Overview of problem formulation and deciding if ML is the right solution

- Converting a business problem into an ML problem
- Demo: Amazon SageMaker Ground Truth
- Hands-on: Amazon SageMaker Ground Truth
- Practice problem formulation
- Formulate problems for projects

Day 2

Checkpoint 1 and Answer Review

Module 4: Preprocessing

- Overview of data collection and integration, and techniques for data preprocessing and visualization
- Practice preprocessing
- Preprocess project data
- Class discussion about projects

Day 3

Checkpoint 2 and Answer Review

Module 5: Model Training

- Choosing the right algorithm
- Formatting and splitting your data for training
- Loss functions and gradient descent for improving your model
- Demo: Create a training job in Amazon SageMaker

Module 6: Model Evaluation

- How to evaluate classification models
- How to evaluate regression models
- Practice model training and evaluation
- Train and evaluate project models
- Initial project presentations

Day 4

Checkpoint 3 and Answer Review

Module 7: Feature Engineering and Model Tuning

- Feature extraction, selection, creation, and transformation
- Hyperparameter tuning
- Demo: SageMaker hyperparameter optimization
- Practice feature engineering and model tuning
- Apply feature engineering and model tuning to projects
- Final project presentations

Module 8: Deployment

- How to deploy, inference, and monitor your model on Amazon SageMaker
- Deploying ML at the edge
- Demo: Creating an Amazon SageMaker endpoint
- Post-assessment
- Course wrap-up

Course Outline

Who Should Attend

- Developers
- Solutions Architects
- Data Engineers
- Anyone with little to no experience with ML and wants to learn about the ML pipeline using Amazon SageMaker

About CloudThat

CloudThat is the first company in India to offer Cloud Training & Consulting services for mid-market & enterprise clients from across the globe. Since our inception in 2012, we have trained over 500K IT professionals from fortune 500 companies on technologies such as Microsoft Azure, Amazon Web Services, VMware, Artificial Intelligence, Machine Learning, Google Cloud, IoT, Dynamics 365, Power Platform, Power BI, HPE AI, DevOps, Big Data, Kubernetes, Terraform and more.

With expertise in all the major Cloud platforms, CloudThat is a proud Microsoft Gold Partner, AWS Authorized Training Partner, VMware Authorized Training Reseller, Google Cloud Platform Partner and HPE Learning Partner. Through sheer dedication and commitment towards customer excellence, we have been the winner of the Microsoft Asia Superstar Campaign for India – 2021 as well as recognized as the winner of Microsoft Learning Partner of the Year 2021 Finalist award. Recently, we have been recognized as the Microsoft 2022 Partner of the Year Finalist - Learning Award.

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300+
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500+
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