

AWS Machine Learning with Data Analytics

Course Duration: 44 Hours

Course Code: AWS-MLDA-101

1. Course Overview

The AWS Machine Learning with Data Analytics course is designed to provide participants with a comprehensive understanding of machine learning concepts and data analytics using Amazon Web Services. The course focuses on building predictive models, analyzing data, and deploying scalable ML solutions on the AWS platform. Learners will gain hands-on experience with AWS tools and services such as SageMaker, AWS Lambda, and Redshift to solve real-world business problems.

2. What You'll Learn:

- Understand the fundamentals of machine learning and data analytics.
- Explore AWS services for ML model development, training, and deployment.
- Analyze large datasets using AWS analytics tools.
- Build, train, and deploy predictive models on AWS.
- Implement end-to-end machine learning pipelines in cloud environments.
- Gain insights from data to support business decision-making.

3. Target Audience:

- Data analysts and data scientists looking to enhance their AWS skills.
- IT professionals and developers interested in machine learning and analytics.

- Business professionals seeking to leverage AWS for data-driven decision-making.
- Students and graduates aiming to build a career in cloud-based AI and ML.

4. Pre-Requisites:

- Basic understanding of programming (Python preferred).
- Familiarity with cloud computing concepts.
- Fundamental knowledge of statistics and mathematics is helpful.
- Basic understanding of data analysis and databases.

5. Course Content:

Module 1: Introduction to AWS Machine Learning

- Overview of AWS ML services
- Understanding machine learning concepts and workflow

Module 2: Data Analytics on AWS

- AWS data analytics services (Redshift, Athena, EMR)
- Data collection, processing, and storage

Module 3: Machine Learning Models

- Supervised and unsupervised learning
- Model selection, training, and evaluation

Module 4: AWS SageMaker for ML Development

- Building and deploying models with SageMaker
- Hands-on exercises with real datasets

Module 5: Advanced Analytics and Visualization

- Data visualization techniques
- Using AWS QuickSight for insights

Module 6: End-to-End ML Pipeline Deployment

- Automating ML workflows
- Integrating models with applications

Module 7: Case Studies and Project Work

- Real-world examples
- Hands-on projects to reinforce learning

