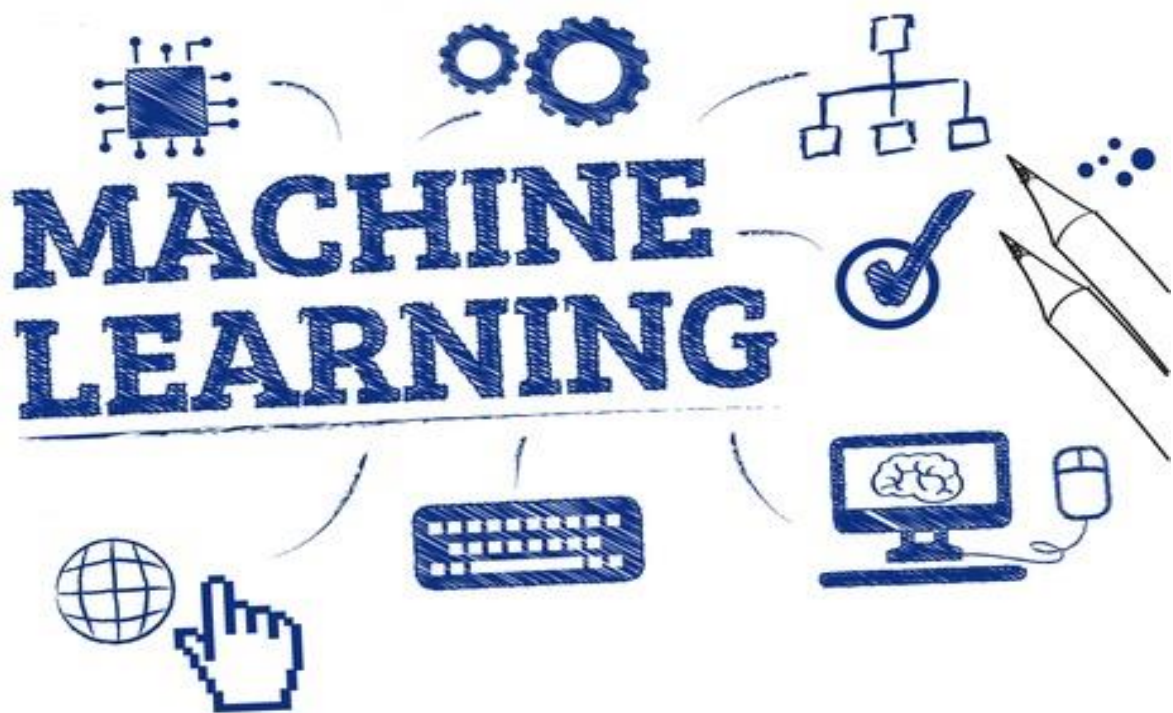


# TechyEdz Solutions

A Blended Learning Approach



**AWS Machine Learning  
Speciality**

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# AWS Certified Machine Learning – Specialty (MLS-C01)

## Course Overview:

The AWS Certified Machine Learning - Specialty (MLS-C01) examination is intended for individuals who perform a development or data science role. This exam validates an examinee's ability to build, train, tune, and deploy machine learning (ML) models using the AWS Cloud.

Since 2006, Amazon Web Services has been the world's most comprehensive and broadly adopted cloud platform. AWS offers over 90 fully featured services for compute, storage, networking, database, analytics, application services, deployment, management, developer, mobile, Internet of Things (IoT), Artificial Intelligence, security, hybrid and enterprise applications, from 44 Availability Zones across 16 geographic regions. AWS services are trusted by millions of active customers around the world — including the fastest-growing startups, largest enterprises, and leading government agencies — to power their infrastructure, make them more agile, and lower costs. It also gives you the hands-on experience required to use machine learning and deep learning in a real-world environment.

This course starts off with coming to grips with Machine Learning (ML), Deep Learning (DL), and Artificial Intelligence (AI) terminology. After the theory comes the practice. You'll get hands-on with a number of ML frameworks and AWS services specific to the certification.

## Course Outline:

### Introduction to Machine Learning

- What is Artificial Intelligence
- What is Machine Learning
- What is Deep Learning
- Understanding Neural Networks
- Machine Learning Algorithms Explained

### Machine Learning Pipeline

- The Machine Learning Process

## **Data**

- Introduction
- Feature Selection and Engineering
- Principal Component Analysis (PCA)
- Missing and Unbalanced Data
- Label and One Hot Encoding
- Splitting and Randomization
- RecordIO Format

## **Machine Learning Algorithms**

- Introduction
- Logistical Regression
- Linear Regression
- Support Vector Machines
- Decision Trees
- Random Forests
- K-Means
- K-Nearest Neighbour
- Latent Dirichlet Allocation (LDA) Algorithm

## **Deep Learning Algorithms**

- Introduction
- Neural Networks
- Convolutional Neural Networks (CNN)
- Recurrent Neural Networks (RNN)

## **Data Engineering**

- Create data repositories for machine learning
- Identify and implement a data-ingestion solution
- Identify and implement a data-transformation solution

## **Exploratory Data Analysis**

- Sanitize and prepare data for modelling
- Perform feature engineering
- Analyze and visualize data for machine learning

## Modeling

- Frame business problems as machine learning problems.
- Select the appropriate model(s) for a given machine learning problem.
- Train machine learning models.
- Perform hyperparameter optimization.
- Evaluate machine learning models

## Machine Learning Implementation and Operations

- Build machine learning solutions for performance, availability, scalability, resiliency, and fault tolerance
- Recommend and implement the appropriate machine learning services and features for a given problem
- Apply basic AWS security practices to machine learning solutions
- Deploy and operationalize machine learning solutions.

## AWS Services

- Introduction
- S3
- Glue
- Athena
- QuickSight
- Kinesis, Streams, Firehose, Video, and Analytics
- EMR with Spark
- EC2 for ML
- Amazon ML

## Amazon AI Services: Computer Vision

- Introduction to Amazon Rekognition
- Introduction to AWS DeepLens
- Hands-on Rekognition: Automated Video Editing
- Deep Dive on Amazon Rekognition

## Amazon AI Services: NLP

- Introduction to Amazon Comprehend

- Introduction to Amazon Comprehend Medical7
- Introduction to Amazon Translate
- Introduction to Amazon Transcribe
- Deep Dive with Amazon Transcribe

### **Introduction to Amazon SageMaker**

- Introduction to Amazon SageMaker
- Introduction to Amazon SageMaker GroundTruth
- Introduction to Amazon SageMaker Neo
- Automatic model tuning using Amazon SageMaker
- Amazon Sagemaker: Object Detection on Images labeled with Ground Truth
- Build a text classification model with Glue and Sagemaker

### **Prerequisites:**

The successful candidate likely has 1–2 years of hands-on experience developing, architecting, or running ML/deep learning workloads on the AWS Cloud, along with:

- The ability to express the intuition behind basic ML algorithms
- Experience performing basic hyperparameter optimization
- Experience with ML and deep learning frameworks
- The ability to follow model-training best practices
- The ability to follow deployment and operational best practices

### **Who can Attend:**

- Individuals performing a development or data science role seeking certification in machine learning and AWS.

### **Number of Hours: 40hrs**

### **Certification: AWS Certified Machine Learning – Specialty (MLS-C01)**



### **Key Features:**

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification

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