

ICT368 AWS Academy Data Analytics and Machine Learning Foundation

Level: 3

Credit Units: 5 Credit Units

Language: ENGLISH

Presentation Pattern: EVERY SEMESTER

Synopsis:

ICT368 AWS Academy Data Analytics and Machine Learning Foundation includes two major topics. Data Analytics is a series of lab exercises that teach students how to conduct Big Data analysis with practical, real-world examples. Students will learn how to analyze extremely large data sets, and to create visual representations of that data, using a case-study approach. The labs and learning resources provide students with hands-on experience working with data at scale. Machine Learning Foundations introduces students to the concepts and terminology of Artificial Intelligence and machine learning. By the end of this course, students will be able to select and apply machine learning services to resolve business problems. They will also be able to label, build, train, and deploy a custom machine learning model through a guided, hands-on approach. This course will prepare students to take the AWS Certified Data Analytics - Specialty and AWS Certified Machine Learning – Specialty level AWS Certification exams.

Topics:

- Ingesting Data into Amazon S3 and Querying Data Using Amazon Athena
- Transforming Data Using Amazon S3, AWS Glue, and Amazon Athena
- Loading the Amazon Redshift Cluster with Data and Querying
- Analyze data with Amazon SageMaker, Jupyter notebooks, and Bokeh
- Setting up and Executing a Data Pipeline Job to Load Data into Amazon S3
- Streaming Data with AWS Kinesis Firehose, Amazon Elasticsearch Service, and Kibana
- Using AWS IoT Analytics for Data Ingestion and Analysis
- Introducing Machine Learning
- Implementing a Machine Learning pipeline with Amazon SageMaker
- Introducing Forecasting
- Introducing Computer Vision
- Introducing Natural Language Processing

Learning Outcome:

- Describe big data analytical concepts and machine learning (ML)
- Illustrate managed Amazon ML services for forecasting, computer vision, and natural language processing
- Analyze unstructured data and IoT data
- Implement loading and querying data in a data warehouse, execute queries for a data store with manual schema specification and automated schema generation
- Design visualization for structured and unstructured data
- Create a machine learning pipeline using Amazon SageMaker

Assessment Strategies (Evening Class):

Components	Description	Weightage Allocation (%)
Overall Examinable Components	Online Exam	100
Total		100