

AWS Academy Machine Learning Foundations

Module 1: Welcome to AWS Academy Machine Learning Foundations



Module objectives

At the end of this module, you should be able to:

- Identify course prerequisites and objectives
- Describe the various roles that require machine learning knowledge
- Identify resources for further learning

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Section 1: Course prerequisites and objectives

Prerequisites

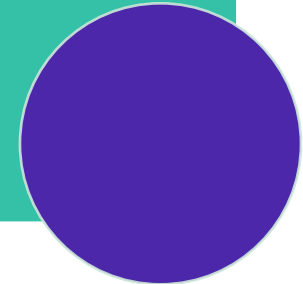
- IT technical knowledge
- Completion of AWS Academy Cloud Foundations
- Intermediate skills with Python programming
- General knowledge of applied statistics

General required knowledge



- Familiarity with cloud computing concepts
- Working knowledge of distributed systems
- Familiarity with general networking concepts
- Working knowledge of multi-tier architectures

Preferred knowledge



Course objectives

- Describe machine learning (ML)
- Implement a machine learning pipeline using Amazon SageMaker
- Use managed Amazon ML services for forecasting
- Use managed Amazon ML services for computer vision
- Use managed Amazon ML services for natural language processing



Course outline



Module 1: Welcome to AWS Academy
Machine Learning

Module 2: Introducing Machine
Learning

Module 3: Implementing a Machine
Learning Pipeline with Amazon
SageMaker

Module 4: Introducing Forecasting

Module 5: Introducing Computer Vision

Module 6: Introducing Natural
Language Processing

Module 7: Course Summary



Module sections:

1. What is machine learning?
2. Business problems that are solved with machine learning
3. Machine learning process
4. Machine learning tools overview
5. Machine learning challenges



Module 3: Implementing a Machine Learning Pipeline with Amazon SageMaker

Module sections:

1. Scenario introduction
2. Collecting and securing data
3. Evaluating your data
4. Feature engineering
5. Training
6. Hosting and using the model
7. Evaluating the accuracy of the model
8. Hyperparameter and model tuning



Module 4: Introducing Forecasting

Module sections:

1. Forecasting overview
2. Processing time series data
3. Using Amazon Forecast



Module 5: Introducing Computer Vision

Module sections:

1. Introducing computer vision
2. Analyzing image and video
3. Preparing custom datasets for computer vision



Module 6: Introducing Natural Language Processing

Module sections:

1. Overview of natural language processing (NLP)
2. Natural language processing managed services



Module 7: Course Summary

Module sections:

1. Course summary
2. Amazon documentation
3. Certification requirements



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Section 2: Machine learning job roles

Data scientist role

- Applying knowledge of statistics and analytical skills to interpret data
- Data scientists often have degrees in statistics, computer science, or economics
- Some programming skills are required



Machine learning engineer

- Emphasis on programming and system design skills
- Often have background as a developer or software architect
- Some knowledge of statistics required



Applied science researcher

- Applies machine learning technology to a specific domain
- Requires knowledge of both the domain and machine learning



Machine learning developer role

- Integrating machine learning with software applications
- Requires strong application development skills and machine learning knowledge



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Section 3: Resources, documentation, and whitepapers

Resources and documentation

- [Machine Learning on AWS](#)
- [AWS Machine Learning Blog](#)
- [Machine Learning Solutions in AWS Marketplace](#)
- [Amazon Machine Learning Service Documentation](#)
- [Machine Learning Solutions in AWS Marketplace](#)
- [Amazon Machine Learning Service Documentation](#)
- [Machine Learning in the AWS Partner Network](#)

Thank you