Amazon SageMaker Studio for Data Scientists

Duration: 3 Days Course Code: GK110001

Overview:

Amazon SageMaker Studio helps data scientists prepare, build, train, deploy, and monitor machine learning (ML) models quickly.

It does this by bringing together a broad set of capabilities purpose-built for ML. This course prepares experienced data scientists to use the tools that are a part of SageMaker Studio, including Amazon CodeWhisperer and Amazon CodeGuru Security scan extensions, to improve productivity at every step of the ML lifecycle.
- Course level: Advanced
- Duration: 3 days

Updated August 2026

Target Audience:

Experienced data scientists who are proficient in ML and deep learning fundamentals

Objectives:

- **By the end of the training, participants will be able to:**
- Accelerate the process to prepare, build, train, deploy, and monitor ML solutions using Amazon SageMaker Studio

Prerequisites:

We recommend that all attendees of this course have:

- Experience using ML frameworks
- Python programming experience
- At least 1 year of experience as a data scientist responsible for training, tuning, and deploying models
- AWS Technical Essentials digital or classroom training

Testing and Certification

None

Follow-on-Courses:

- GK0630 - Practical Data Science with Amazon SageMaker
- GK910029 - Machine Learning Engineering on AWS

Content:

Day 1

Module 1: Amazon SageMaker Studio Setup

- JupyterLab Extensions in SageMaker Studio
- Demonstration: SageMaker user interface demo

Module 2: Data Processing

- Using SageMaker Data Wrangler for data processing
- Hands-On Lab: Analyze and prepare data using Amazon SageMaker Data Wrangler
- Using Amazon EMR
- Hands-On Lab: Analyze and prepare data at scale using Amazon EMR
- Using AWS Glue interactive sessions
- Using SageMaker Processing with custom scripts
- Hands-On Lab: Data processing using Amazon SageMaker Processing and SageMaker Python SDK
- SageMaker Feature Store
- Hands-On Lab: Feature engineering using SageMaker Feature Store

Module 3: Model Development

- SageMaker training jobs
- Built-in algorithms
- Bring your own script
- Bring your own container
- SageMaker Experiments
- Hands-On Lab: Using SageMaker Experiments to Track Iterations of Training and Tuning Models

Day 2

Module 3: Model Development (continued)

- SageMaker Debugger
- Hands-On Lab: Analyzing, Detecting, and Setting Alerts Using SageMaker Debugger
- Automatic model tuning
- SageMaker Autopilot: Automated ML
- Demonstration: SageMaker Autopilot
- Bias detection
- Hands-On Lab: Using SageMaker Clarify for Bias and Explainability
- SageMaker Jumpstart

Module 4: Deployment and Inference

- SageMaker Model Registry
- SageMaker Pipelines
- Hands-On Lab: Using SageMaker Pipelines and SageMaker Model Registry with SageMaker Studio
- SageMaker model inference options
- Scaling
- Testing strategies, performance, and optimization
- Hands-On Lab: Inferencing with SageMaker Studio

Module 5: Monitoring

- Amazon SageMaker Model Monitor
- Discussion: Case study
- Demonstration: Model Monitoring

Day 3

Module 6: Managing SageMaker Studio Resources and Updates

- Accrued cost and shutting down
- Updates Capstone
- Environment setup
- Challenge 1: Analyze and prepare the dataset with SageMaker Data Wrangler
- Challenge 2: Create feature groups in SageMaker Feature Store
- Challenge 3: Perform and manage model training and tuning using SageMaker Experiments
- (Optional) Challenge 4: Use SageMaker Debugger for training performance and model optimization
- Challenge 5: Evaluate the model for bias using SageMaker Clarify
- Challenge 6: Perform batch predictions using model endpoint
- (Optional) Challenge 7: Automate full model development process using SageMaker Pipeline

Additional Information:

Activities :
This course includes presentations, hands-on labs, demonstrations, discussions, and a capstone project.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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