Updated 03/14/2024

Sign up

Amazon SageMaker training: Machine Learning on AWS

2 days (14 hours)

Presentation

Learn how to deploy your Machine Learning models on the Amazon cloud with our Amazon SageMaker training.

Our course program will introduce you to Machine Learning (supervised, unsupervised and reinforcement) and its benefits for your business. We'll guide you through the preparation and transformation of your data using the SageMaker Studio interface.

We'll teach you not only how to train, but also how to evaluate your ML models, from choosing algorithms and setting up training instances to interpreting the results. Our program also includes the use of CodeWhisperer to optimize your code.

At the end of this course, you'll know how to deploy and monitor your learning models on the Amazon cloud. You'll benefit from rapid delivery workflows thanks to the implementation of MLOps.

Objectives

- Understanding the benefits and limitations of Amazon SageMaker
- Mastering data preparation techniques with Amazon SageMaker Studio
- Deploying Machine Learning models on AWS
- Monitor and interpret results

Target audience

- Data Scientists
- DevOps

- Application developers
- Data engineers
- AI Engineers

Prerequisites

- Basic knowledge of Python
- Knowledge of Machine Learning
- Know how to use Amazon's cloud service or have taken our AWS training course

Technical requirements

- Amazon account with SageMaker and CodeWhisperer functionalities
- Python installed

AMAZON SAGEMAKER TRAINING PROGRAM

INTRODUCTION TO AMAZON SAGEMAKER

- Introducing Machine Learning
- Introducing Amazon SageMaker
- Amazon SageMaker benefits and limitations
- The different types of learning :
  - Supervised
  - Unsupervised
  - By reinforcement
- Tailor ML issues to your needs
- Introducing the Amazon SageMaker Studio interface

DATA PREPARATION AND EXPLORATION

- The importance of data analysis and preparation
- Good cleaning practices
- Data manipulation with Amazon SageMaker Studio
- Using notebooks
- Data preparation with SageMaker Data Wrangler
- Data visualization
- Data analysis

MODEL TRAINING AND EVALUATION

- ML workflow overview

- Which algorithm to choose?
- Configure your training instances
- Resource management
- Model evaluation techniques
- Interpretation of results
- Amazon CodeWhisperer for code optimization

DEPLOYMENT AND MONITORING

- Strategies for deploying ML models in production
- Deploy models to endpoints in real time
- Monitoring with Amazon SageMaker Model Monitor
- Version management and updating
- Best practices for continuous testing and deployment

AUTOMATION

- Automating ML workflows with SageMaker Pipelines
- Introduction to SageMaker Feature Store
- SageMaker Clarify
  - What is SageMaker Clarify?
  - Evaluating your models
  - Bias detection
- Understanding and applying MLOps
- MLOps best practices
- Case studies

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.