





The Machine Learning Pipeline on AWS

Duración: 4 Días Código del Curso: GK7376 Version: 1.1.2 Método de Impartición: Curso Remoto (Virtual)

Temario:

This course explores how to use the machine learning (ML) pipeline to solve a real business problem in a project-based learning environment. Students will learn about each phase of the pipeline from instructor presentations and demonstrations and then apply that knowledge to complete a project solving one of three business problems: fraud detection, recommendation engines, or flight delays. By the end of the course, students will have successfully built, trained, evaluated, tuned, and deployed an ML model using Amazon SageMaker that solves their selected business problem.

Curso Remoto (Abierto)

Nuestra solución de formación remota o virtual, combina tecnologías de alta calidad y la experiencia de nuestros formadores, contenidos, ejercicios e interacción entre compañeros que estén atendiendo la formación, para garantizar una sesión formativa superior, independiente de la ubicación de los alumnos.

Dirigido a:

This course is intended for:

- Developers
- Solutions Architects
- Data Engineers
- Anyone with little to no experience with ML and wants to learn about the ML pipeline using Amazon SageMaker

Objetivos:

- In this course, you will learn to:
- Select and justify the appropriate ML approach for a given business problem
- Use the ML pipeline to solve a specific business problem
- Train, evaluate, deploy, and tune an ML model using Amazon SageMaker
- Describe some of the best practices for designing scalable, cost-optimized, and secure ML pipelines in AWS
- Apply machine learning to a real-life business problem after the course is complete

Prerequisitos:

We recommend that attendees of this course have:

- Basic knowledge of Python programming language
- Basic understanding of AWS Cloud infrastructure (Amazon S3 and Amazon CloudWatch)
- Basic experience working in a Jupyter notebook environment
- GK4534 AWS Cloud Practitioner Essentials

Contenido:

Day One

Pre-assessment

Module 1: Introduction to Machine Learning and the ML Pipeline

- Overview of machine learning, including use cases, types of machine learning, and key concepts
- Overview of the ML pipeline
- Introduction to course projects and approach

Module 2: Introduction to Amazon SageMaker

- Introduction to Amazon SageMaker
- Demo: Amazon SageMaker and Jupyter notebooks
- Lab 1: Introduction to Amazon SageMaker

Module 3: Problem Formulation

- Overview of problem formulation and deciding if ML is the right solution
- Converting a business problem into an ML problem
- Demo: Amazon SageMaker Ground Truth
- Hands-on: Amazon SageMaker Ground Truth
- Problem Formulation Exercise and Review
- Project work for Problem Formulation

Day Two

Module 4: Preprocessing

- Overview of data collection and integration, and techniques for data preprocessing and visualization
- Lab 2: Data Preprocessing (including project work)

Module 5: Model Training

- Choosing the right algorithm
- Formatting and splitting your data for training
- Loss functions and gradient descent for improving your model
- Demo: Create a training job in Amazon SageMaker

Module 6: Model Training

- How to evaluate classification models
- How to evaluate regression models
- Practice model training and evaluation
- Train and evaluate project models
- Lab 3: Model Training and Evaluation (including project work)
- Project Share-Out 1
- How to evaluate classification models
- How to evaluate regression models
- Practice model training and evaluation
- Train and evaluate project models
- Lab 3: Model Training and Evaluation (including project work)
- Project Share-Out 1

Module 7: Feature Engineering and Model Tuning

- Feature extraction, selection, creation, and transformation
- Hyperparameter tuning
- Demo: SageMaker hyperparameter optimization
- Feature extraction, selection, creation, and transformation
- Hyperparameter tuning
- Demo: SageMaker hyperparameter optimization

Day Three

Recap and Checkpoint #2

Module 6: Model Training

- How to evaluate classification models
- How to evaluate regression models
- Practice model training and evaluation
- Train and evaluate project models
- Lab 3: Model Training and Evaluation (including project work)
- Project Share-Out 1
- How to evaluate classification models
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Day Four

Lab 4: Feature Engineering (including project work)

Module 8: Module Deployment

- How to deploy, inference, and monitor your model on Amazon SageMaker
- Deploying ML at the edge

Module 9: Course Wrap-Up

- Project Share-Out 2
- Post-Assessment
- Wrap-up

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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