AWSC-14 - THE MACHINE LEARNING PIPELINE ON AWS

Categoria: **Amazon Web Services**

INFORMAZIONI SUL CORSO

Durata:	Categoria:	Qualifica Istruttore:	Dedicato a:	Produttore:
4 Giorni	Amazon Web Services	AWS Authorized Instructor	Professionista IT	AWS

OBIETTIVI

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

PREREQUISITI

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

CONTENUTI

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
-Hands-on: Amazon SageMaker and Jupyter notebooks

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

-Practice problem formulation
-Formulate problems for projects

Module 4: Preprocessing
-Overview of data collection and integration, and techniques for data preprocessing and visualization
-Practice preprocessing
-Preprocess project data
-Class discussion about projects

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 Evaluation
-How to evaluate classification models
-How to evaluate regression models
-Practice model training and evaluation
-Train and evaluate project models
-Initial project presentations

Module 7: Feature Engineering and Model Tuning
-Feature extraction, selection, creation, and transformation
-Hyperparameter tuning
-Demo: SageMaker hyperparameter optimization
-Practice feature engineering and model tuning
-Apply feature engineering and model tuning to projects
-Final project presentations

Module 8: Deployment
-How to deploy, inference, and monitor your model on Amazon SageMaker
-Deploying ML at the edge
-Demo: Creating an Amazon SageMaker endpoint
-Post-assessment
-Course wrap-up

INFO

Esame: MLS-C01 - AWS Certified Machine Learning Specialty
Manuale: Materiale didattico ufficiale AWS in formato digitale
Prezzo manuale: incluso nel prezzo del corso a Calendario
Natura del corso: Operativo (previsti lab su PC)