Practical Data Science with Amazon SageMaker

Category: AI, Data & Analytics | **Vendor:** Amazon Web Services

Duration: 8.00 hours (1 days) **6.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

In this course, learn how to solve a real-world use case with machine learning and produce actionable results using Amazon SageMaker. This course teaches you how to use Amazon SageMaker to cover the different stages of the typical data science process, from analyzing and visualizing a data set, to preparing the data and feature engineering, down to the practical aspects of model building, training, tuning and deployment.

About This Course

In this course, learn how to solve a real-world use case with machine learning and produce actionable results using Amazon SageMaker. This course teaches you how to use Amazon SageMaker to cover the different stages of the typical data science process, from analyzing and visualizing a data set, to preparing the data and feature engineering, down to the practical aspects of model building, training, tuning and deployment.

Who Should Attend

This course is intended for:

A technical audience at an intermediate level

Prerequisites & Entry Requirements

General Prerequisites:

We recommend that attendees of this course have:

- AWS Technical Essentials
- Entry-level knowledge of Python programming
- Entry-level knowledge of statistics

Learning Outcomes

Upon successful completion of this course, participants will be able to:

Using Amazon SageMaker, this course teaches you how to:

Prepare a dataset for training.

Train and evaluate a machine learning model.

Automatically tune a machine learning model.

Prepare a machine learning model for production.

Think critically about machine learning model results

Detailed Course Outline

Day 1

- Business problem: Churn prediction

  Load and display the dataset

  Assess features and determine which Amazon SageMaker algorithm to use

  Use Amazon Sagemaker to train, evaluate, and automatically tune the model

  Deploy the model

  Assess relative cost of errors

, Module 1: Introduction to Machine Learning

- Benefits of machine learning (ML)
- Types of ML approaches
- Framing the business problem
- Prediction quality
- Processes, roles, and responsibilities for ML projects

Module 2: Preparing a Dataset

- Data analysis and preparation

- Data preparation tools
- Demonstration: Review Amazon SageMaker Studio and Notebooks
- Hands-On Lab: Data Preparation with SageMaker Data Wrangler

Module 3: Training a Model

- Steps to train a model
- Choose an algorithm
- Train the model in Amazon SageMaker
- Hands-On Lab: Training a Model with Amazon SageMaker
- Amazon CodeWhisperer
- Demonstration: Amazon CodeWhisperer in SageMaker Studio Notebooks

Module 4: Evaluating and Tuning a Model

- Model evaluation
- Model tuning and hyperparameter optimization
- Hands-On Lab: Model Tuning and Hyperparameter Optimization with Amazon SageMaker

Module 5: Deploying a Model

- Model deployment
- Hands-On Lab: Deploy a Model to a Real-Time Endpoint and Generate a Prediction

Module 6: Operational Challenges

- Responsible ML
- ML team and MLOps
- Automation
- Monitoring
- Updating models (model testing and deployment)

Module 7: Other Model-Building Tools

- Different tools for different skills and business needs

- No-code ML with Amazon SageMaker Canvas

- Demonstration: Overview of Amazon SageMaker Canvas

- Amazon SageMaker Studio Lab

- Demonstration: Overview of SageMaker Studio Lab

- (Optional) Hands-On Lab: Integrating a Web Application with an Amazon SageMaker Model Endpoint, Introduction to data prep and SageMaker, Introduction to machine learning, Training and evaluating a model, Problem formulation and dataset preparation, Data analysis and visualization, Deployment / production readiness, Automatically tune a model, Amazon SageMaker architecture and features, Relative cost of errors

Skills You Will Learn:

In this course, you will learn to:

- Discuss the benefits of different types of machine learning for solving business problems
- Describe the typical processes, roles, and responsibilities on a team that builds and deploys ML systems
- Explain how data scientists use AWS tools and ML to solve a common business problem
- Summarize the steps a data scientist takes to prepare data
- Summarize the steps a data scientist takes to train ML models
- Summarize the steps a data scientist takes to evaluate and tune ML models
- Summarize the steps to deploy a model to an endpoint and generate predictions
- Describe the challenges for operationalizing ML models
- Match AWS tools with their ML function

Additional Course Details

Nexus Humans Practical Data Science with Amazon SageMaker training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Practical Data Science with Amazon SageMaker course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Practical Data Science with Amazon SageMaker?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 1-day Practical Data Science with Amazon SageMaker course provides up to 6.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Practical Data Science with Amazon SageMaker training?

The training takes place over 1 day(s), with each day lasting approximately 8.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Practical Data Science with Amazon SageMaker?

Yes, we provide corporate training, dedicated training, and closed classes for Practical Data Science with Amazon SageMaker. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Practical Data Science with Amazon SageMaker, Machine Learning, PDSASM, Amazon Web Services, vILT

Q: Why choose Nexus Human for Practical Data Science with Amazon SageMaker?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Practical Data Science with Amazon SageMaker training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

Nexus Human

Professional Training & Development

Email: info@nexushuman.com

Website: www.nexushuman.com

Phone: +353 1 889 8700 (Ireland) | +44 20 8142 8961 (UK)

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