



CLOUD COMPUTING AND VIRTUALISATION

Practical Data Science with Amazon SageMaker

LENGTH

1 day

AWS AT LUMIFY WORK

Lumify Work is an official AWS Training Partner for Australia, New Zealand, and the Philippines. Through our Authorised AWS Instructors, we can provide you with a learning path that's relevant to you and your organisation, so you can get more out of the cloud. We offer virtual and face-to-face classroom-based training to help you build your cloud skills and enable you to achieve industry-recognised AWS Certification.



WHY STUDY THIS COURSE

Learn how to solve a real-world use case with machine learning and produce actionable results using Amazon SageMaker.

This course walks through the stages of a typical data science process for Machine Learning from analysing and visualising a dataset to preparing the data, and feature engineering. Individuals will also learn practical aspects of model building, training, tuning, and deployment with Amazon SageMaker. Real life use case includes customer retention analysis to inform customer loyalty programs.

WHAT YOU'LL LEARN

This course is designed to teach participants 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

<https://www.lumifywork.com/en-ph/courses/practical-data-science-with-amazon-sagemaker/>





Practical Data Science with Amazon SageMaker



My instructor was great being able to put scenarios into real world instances that related to my specific situation.

I was made to feel welcome from the moment I arrived and the ability to sit as a group outside the classroom to discuss our situations and our goals was extremely valuable.

I learnt a lot and felt it was important that my goals by attending this course were met.

Great job Lumify Work team.

AMANDA NICOL
IT SUPPORT SERVICES
MANAGER - HEALTH WORLD
LIMITED

COURSE SUBJECTS

Module 1: Introduction to machine learning

- Types of ML
- Job Roles in ML
- Steps in the ML pipeline

Module 2: Introduction to data prep and SageMaker

- Training and test dataset defined
- Introduction to SageMaker
- Demonstration: SageMaker console
- Demonstration: Launching a Jupyter notebook

Module 3: Problem formulation and dataset preparation

- Business challenge: Customer churn
- Review customer churn dataset

Module 4: Data analysis and visualisation

- Demonstration: Loading and visualising your dataset
- Exercise 1: Relating features to target variables
- Exercise 2: Relationships between attributes
- Demonstration: Cleaning the data

Module 5: Training and evaluating a model

- Types of algorithms
- XGBoost and SageMaker
- Demonstration: Training the data
- Exercise 3: Finishing the estimator definition

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Lumify Work Customised Training

We can also deliver and customise this training course for larger groups saving your organisation time, money and resources.

For more information, please contact us on [02 8286 9429](tel:0282869429).

- Exercise 4: Setting hyper parameters
- Exercise 5: Deploying the model
- Demonstration: hyper parameter tuning with SageMaker
- Demonstration: Evaluating model performance

Module 6: Automatically tune a model

- Automatic hyper parameter tuning with SageMaker
- Exercises 6-9: Tuning jobs

Module 7: Deployment / production readiness

- Deploying a model to an endpoint
- A/B deployment for testing
- Auto Scaling
- Demonstration: Configure and test auto scaling
- Demonstration: Check hyper parameter tuning job
- Demonstration: AWS Auto Scaling
- Exercise 10-11: Set up AWS Auto Scaling

Module 8: Relative cost of errors

- Cost of various error types
- Demo: Binary classification cutoff

Module 9: Amazon SageMaker architecture and features

- Accessing Amazon SageMaker notebooks in a VPC
- Amazon SageMaker batch transforms
- Amazon SageMaker Ground Truth
- Amazon SageMaker Neo

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Please note: This is an emerging technology course. Course outline is subject to change as needed.

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WHO IS THE COURSE FOR?

This course is intended for:

- Developers
- Data scientists

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PREREQUISITES

It is recommended that attendees have the following prerequisites:

- Familiarity with Python programming language
- Basic understanding of Machine Learning

The supply of this course by Lumify Work is governed by the booking terms and conditions. Please read the terms and conditions carefully before enrolling in this course, as enrolment in the course is conditional on acceptance of these terms and conditions.

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