Lesson 1: Introduction to Machine Learning

In this lesson we learned:

- The big picture – what was this course about and why does it matter?
- The prerequisites you needed to have before you took this course.
- The business stakeholders you would interact with as a professional in this field.
- A short history of machine learning, to give you context on where we are now.
- When and when not to use machine learning.
- The tools and environment you needed for the course.
- Setting up AWS Sagemaker. The main IDE you used in the course.
- The project you'll build at the end of the course.

If you followed along with this lesson, you should now be able to fully start on the later lessons in this course.

Lesson 2: Exploratory Data Analysis

In this lesson we learned:

- How to use AWS Sagemaker Studio to access datasets from S3 and perform data analysis functions using AWS tools.
- Performed data analysis and feature engineering with Data Wrangler.
- Performed data analysis and feature engineering with Pandas in Sagemaker Studio.
- Labeled new data for a dataset with Sagemaker ground truth.

If you followed the lesson, you would be able to load, analyze, and create data using tools from AWS Sagemaker

Lesson 3: Machine Learning Concepts

In this lesson we learned:

- How to design a domain, model, and data outline for a case study.
- Built a ML lifecycle and applied it to a dataset.
- Differentiated between supervised and unsupervised models and applied them to an appropriate dataset.
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After this lesson, you would be able to model data into a conceptual framework and start training the general algorithm types.

Lesson 4: Model Deployment Workflow

In this lesson we learned:

- How to load a new dataset in Sagemaker studio, created the 3 data set types, and identified which columns were features or target values.
- Cleaned or created new features from a dataset.
- Trained (fitted) a regression/classification model using scikit learn.
- Evaluated a trained model using methods like mse, rmse, r2, accuracy, f1, and precision.
- Tuned a model's hyper parameters to achieve a better result.

And the end of this lesson, you would be able to build a repeatable workflow for building, training, and evaluating models.

Lesson 5: Algorithms and Tools

In this lesson we learned:

- Train, test, and optimize
    - A linear model
    - A tree-based model
    - A XGBoost model.
    - An AutoGluon Tabular prediction model
- Create a model using Sagemaker Studio jumpstart.

If you followed along in this lesson, you should be able to use a large range of different models to build and solve different business problems.