Amazon Web Services - Introduction

 (https://github.com/learn-co-curriculum/dsc-productionizing-machine-learning-models-section-intro) **(https://github.com/learn-co-curriculum/dsc-productionizing-machine-learning-models-section-intro/issues/new)**

Introduction

In this section, you'll be introduced to Amazon Web Services (AWS) - the most popular cloud service.

Machine Learning and the Cloud

We'll begin this section by learning about all the ways that cloud computing services such as *Amazon Web Services (AWS)* have made things better and easier for data scientists. We'll also explore why being able to productionize the machine learning models you create so that other people can use them is one of the most valuable skills you can have as a data scientist.

Amazon Web Services (AWS)

One we understand the importance of cloud services and how they fit into the picture for data scientists, we'll jump right in to the most popular cloud service, AWS. We'll learn about what AWS ecosystem contains and how we can use it. We'll also create an account and learn our way around the AWS dashboard.

AWS SageMaker

Once we know the basics of AWS, we'll learn how we can make use of the most important tool for Data Scientists, *AWS SageMaker*! We'll see how we can incorporate AWS SageMaker into our workflow to simplify things like distributed training or model productionization!

Hands-On Practice Shipping Models

Finally, we will train and ship real-world models using AWS SageMaker. We'll start by training and productionizing some classical machine learning models with scikit-learn and then set up endpoints with AWS SageMaker so that we can make them available for inference. Then, we'll move onto training a Deep Learning model with SageMaker, so that we can make use of distributed training to speed things up, and then ship the model to production. Finally, we'll use SageMaker to train and productionize a more advanced Convolutional Neural Network for image classification.

Summary

By the end of this section, you'll know the basics of how to use AWS for Data Science projects, and you'll have hands-on experience training and productionizing three different machine learning models. This will set you up for success with your capstone project!