

Lesson 1: Introduction to Deep Learning Topics within Computer Vision and NLP

In this lesson we learned:

- First, introduce the course. This course is an introduction to how you can build deep learning models and then how you can train and deploy those models using Sagemaker.
- At the end of this course, you will be training a model to perform image classification in Sagemaker and then deploying it to a Sagemaker endpoint. You will also have to query the model endpoint and get an output.
- We will also talk about The business stakeholders you'll interact with as a professional in this field.
- Finally, we will learn the tools and environment you'll need for the course.

You learned about the context of this course to prepare you to be a deep learning engineering career.

Lesson 2: Introduction to Deep Learning

In this lesson we learned:

- What biological neurons are and how they inspired the creations of artificial neurons and neural networks
- How you can create and train your own neural network using Pytorch

You learned how to describe how artificial neural networks are created, trained, and executed. And you trained your own neural network on an image classification problem.

Lesson 3: Common Model Architecture Types and Fine-Tuning

In this lesson we learned:

- About advanced neural network architectures and how they improve upon the drawbacks of vanilla neural networks.
- How to take a network someone else trained and finetune it on our dataset

You learned to identify commonly used deep learning model architectures and fine-tuned a pretrained model for a different task using Pytorch.

Lesson 4: Deploy Deep Learning Models on Sagemaker

In this lesson, we took everything you learned and did Deep Learning in AWS Sagemaker.

You learned how to finetune pretrained models using Sagemaker Jumpstart, debug training jobs, perform hyperparameter tuning, and deploy your models.

Project: Image Classification using AWS SageMaker

Now that you have gone through all the lessons you are now prepared to take on the Project!

To complete the project you will have to:

- Fetch data from an S3 bucket and then preprocess it
- Train a model using Hyperparameter Tuning, Profiling, and Debugging
- And finally, you will need to deploy it to a Sagemaker Endpoint and query it and get a result