

Machine Learning Tools for Developers

Overview

This two day class is an introduction to machine learning technologies and tools for software developers who are getting started with data science projects. The emphasis of this training class is on obtaining and cleaning data such that it is ready to be used for training a machine learning model. It also uses Amazon Web Services as the primary cloud platform.

This class primarily uses the Python programming language, but does not assume knowledge of the Python language or libraries.

Objectives

1. Understand what data science and machine learning are
2. Know which problems require machine learning technology
3. Understand how to use AWS Machine Learning
4. Become familiar with how to use AWS for working with data sets from S3
5. Understand the capabilities of the AWS Deep Learning Amazon Machine Image
6. Learn how to use Python and the pandas library to clean data
7. Become familiar with the Jupyter notebook for data science projects
8. Explore machine learning ideas with Tensorflow
9. Learn how to train a model with a new data set using Spark and Amazon Machine Learning
10. Understand how to get machine learning predictions using an API endpoint

Schedule Day I

Time	Description
8:00-8:30	Kickoff for Machine Learning and Data Science from a Developer's perspective
8:30-9:30	Introduction to Machine Learning
9:30-12:00	Hands on Lab: Spark on Databricks

Time	Description
12:00-1:00	Lunch/Break
1:00-2:00	Hands on Lab: Amazon Machine Learning Tutorial
2:00-3:00	Review of Amazon Web Services - EC2, S3, Deep Learning AMI
3:00-5:00	Hands on Lab: S3 to EC2 to S3

Schedule Day 2

Time	Description
8:00-10:00	Using Jupyter Notebook with the Anaconda Python distribution
10:00-12:00	Cleaning Data with Python
12:00-1:00	Lunch/Break
1:00-2:00	Tensorflow Tutorial with Jupyter Notebook and AWS Deep Learning AMI
2:00-5:00	Hands on Lab: Machine Learning project - create a model to predict wine quality, using both AWS Machine Learning and Databricks

Instructor

Jeff Linwood is a software developer with 18 years of professional experience, working with clients in the Fortune 500, state and federal government, non-profits, and startups. Jeff has taught iOS software development at the University of Texas at Austin for the last four years. He also teaches on-site corporate training programs and has delivered training programs at conferences. Jeff also authored several Java programming books for Apress and Wrox.

Jeff has a master's degree from the University of Texas at Austin, and a bachelors degree from Carnegie Mellon University.