Google Cloud

Launching into Machine Learning

Readings and Videos

Module 1: Get to Know Your Data: Improve Data through Exploratory Data Analysis

Guide to Data Quality Management

Exploratory Data Analysis With Python

How to investigate a dataset with python?

Module 2: Machine Learning in Practice

Supervised and Unsupervised Machine Learning Algorithms

Supervised Learning

What the Hell is Perceptron?

What is Perceptron: A Beginners Tutorial for Perceptron

Perceptrons

Understanding the perceptron neuron model

Machine Learning for Beginners: An Introduction to Neural Networks

What is a Neural Network?

Neural Networks and Deep Learning

Decision Trees and Random Forests

Decision Tree vs. Random Forest – Which Algorithm Should You Use?

Decision Tree and Random Forest

Kernel Methods

Kernel Methods

Modern Neural Networks Generalize on Small Data Sets

Neural Network Architectures for Machine Learning Researchers

Module 3: Training AutoML Models Using Vertex AI

Training AutoML Models

Train an AutoML Model (Cloud Console)

Train an AutoML Model (API)

Optimization objectives for tabular AutoML models

Train an AutoML Edge model using the Cloud Console

Train an AutoML Edge model using the Vertex AI API

Evaluate AutoML Models

Module 4: BigQuery Machine Learning: Develop ML Models Where Your Data Lives

BigQuery ML

Creating and Training Models

BigQuery ML Hyperparameter Tuning

BigQuery ML Model Evaluation Overview

Module 5: Optimization

Introduction to Linear Models

Linear Models

How to Choose a Machine Learning Model – Some Guidelines

How to Choose Loss Functions When Training Deep Learning Neural Networks

4 Common Pitfalls in Putting a Machine Learning Model in Production

Performance Metric

Understanding Confusion Matrix

Module 6: Generalization and Sampling

When to stop Training your Neural Network?

Generalization, Regularization, Overfitting, Bias and Variance in Machine Learning