Programming with Python for Data Science

Modality: On Demand

Duration: 24 Hours

About this course:

This course is created in association with Coding Dojo, which targets people who have initial level experience of Python programming. The course shows understudies how to begin taking a gander at information with the data scientist lens by applying effective, popular mining models so as to uncover helpful insight, utilizing Python, one of the well-known Data Scientists language. Subjects incorporate feature importance and selection, data visualization, clustering, classification, dimensionality reduction, and more! The entirety of the informational collections utilized in this course are included live-information or motivated by domains of the real-world that can advantage from machine learning.

Course Objective:

- The most effective method to represent raw data in a way helpful for determining important data
- Knowledge about machine learning and the kinds of issues it is adept to solving
- How to utilize different techniques of data visualization.
- The most effective method to apply administered learning calculations to your information, for example, support vector and random forest classifier
- The most effective method to utilize principal component analysis and isomap brilliantly to improve your information
- Concepts like model selection, cross-validation, and pipelining
- The big picture of Data Science and Analysis, Machine Learning, and Dive Deeper
- Exploring Data by Basic Plots, Visualizations, Lab – Visualizations, Higher Dimensionality, and Dive Deeper
- Transforming Data with Principal Component Analysis (PCA), Lab – PCA, Isomap, Lab – Isomap, Data Cleansing, and Dive Deeper
- Data Modeling with Clustering, Lab – Clustering, K-Nearest Neighbors, Supervised Learning, Neighbors, Regression, Lab - K-Nearest, Lab – Regression, and Dive Deeper
- Evaluating Data with Confusion, Cross-Validation, Power Tuning, and Dive Deeper

Audience:

Data Scientist

Prerequisite:

No prerequisite required for this course

Course Outline:

The Big Picture

- Data Science and Analysis
- Machine Learning
- The Possibilities
- Dive Deeper

Data And Features

- Features Premiere
- Determining Features
- Manipulating Data
- Feature Representation
- Wrangling Data
- Lab - Data and Features
- Dive Deeper

Exploring Data

- Visualizations
- Basic Plots
- Higher Dimensionality
- Lab - Visualizations
- Dive Deeper

Transforming Data

- Transformations
- Principal Component Analysis (PCA)
- Lab - PCA
- Isomap
- Lab - Isomap
- Data Cleansing
- Dive Deeper

Data Modeling

- Clustering
- Lab - Clustering
- Supervised Learning
- K-Nearest Neighbors
- Lab - K-Nearest Neighbors
- Regression
- Lab - Regression
- Dive Deeper

Data Modeling II

- SVC
- Lab - SVC

- Decision Trees
- Lab - Decision Trees
- Random Forests
- Lab - Random Forests
- Dive Deeper

Evaluating Data

- Confusion
- Cross Validation
- Power Tuning
- Dive Deeper

Final Exam and Course Wrap-Up

- Final Exam
- Final Project
- Wrap-Up?