Code Mania 2019

Practical Machine Learning with Python & IBM Watson Studio

Day	Module Name	Contents
Day -1	Module – 1: Introduction to Machine Learning	• What is Machine Learning • Usecases of Machine Learning • Role of Machine Learning Engineer • Machine Learning Algorithms • Machine Learning Tools & Packages
Day -1	Module – 2: Python Programming	• Introduction to python programming and Environment Setup • Python Basics • Data types • Expressions and Variables • String Operations • Python Data Structures • Python Programming Fundamentals

		• Conditions and Branching • Loops • Functions • Packages
Day-2	Module – 3 : Python for Data science	• Introduction to NumPy • 2D NumPy Array • NumPy: Basic Statistics • Introduction to Matplotlib • Basic Plots with Matplotlib • Histograms • Customization • Introduction to Pandas • Dictionaries & Data frames • Data Manipulations
Day-3	Module – 4 : Importing Data in Python	• Import data from txt files • Import data from flat files with NumPy • Import data from other file types • Import data from Databases • Import data from web through API's • Cleaning Data for Analysis
Day-4	Module – 5: Getting Started with Machine Learning	• Fundamentals of Machine Learning • Supervised & Unsupervised learning • Regression & Classification • Machine Learning Terminology
Day-4 & 5	Module – 6: Supervised Learning - Regression	• Introduction to Scikit-Learn Package • Regression Analysis • Linear Regression • Logistic Regression • Polynomial Regression • Selection of Right Regression Model
Day-6&7	Module – 7 : Supervised Learning – Classification	• Introduction to Classification Problems • Logistic Regression • Decision Tree • Support Vector Machine • K-Nearest Neighboring • Naive-Bayes • Random Forest
Day-8	Module – 8 : Machine Learning – IBM Watson Studio	• Getting started with IBM Watson Studio • Understand the features • Organize resources in a project • Set up a project • Watson Data Platform projects • Project Collaborators • Add associated services • Prepare data

		• Add data to a project • Refine data • Ingest streaming data • Working with Jupyter Notebooks • Create notebooks • Code and run notebooks • Share and publish notebooks • Watson Machine Learning • Setting up your machine learning environment • Building models • Deploying the model & integration to Apps
Day-9 & 10	Module – 9: Project Development	• Project Work -1 • Project Work - 2