Python with Data Science course(3 hours each day),total:36 hours

Day 1: Overview of Data Science:

Skills required becoming a data scientist
Source of Big Data
Steps involved in Data Analytics

Day 2: Big Data, Data Analytics and Python
Different sectors using Big Data
Data Analytics and Python
Python library and package for Data Science
Advantage of using python for Data Science
Data Wrangling and Data Exploration

Handle issues in Data Wrangling
Model selection in Data Exploration

Day 3: Exploratory Data Analysis

How to approach the data
Focus on data
Assumption
EDA Technique (Quantitative and Graphical)

(Introduction of Statistics)
Inferential method
Descriptive Method

Discussion on Mean ,Median,Variance and Standard Deviation

Day 4: **Statistical Analysis**

Range ,Frequency and Central Tendency

Measures of central tendency

Histogram (Graphical Representation)

Bell Curve and Kurtosis explain with Graph

Statistical Technique(Hypothesis Testing)

Hypothesis Testing-Process and Steps

Error type in hypothesis testing

Perform Hypothesis testing on different data type

Chi-Square Test

Day -5:

Installation of anaconda

Installation of Jupyter notebook

Python Variables

Python Strings,loops,conditions

Programming construct of Python

Day 6**(Python data Structure**)

List with example

Python method ,class and object

Tuples,element access in tuples

Example of tuples

Slicing tuples

Dictionary(access and modify Dictionary elements with example)

Set with example

Day 7:Python **Package for Scientific computing-Numpy**

   Class and basic operation of ndarray

   Accessing array elements

   Copy and view

   Numpy method for shape manipulation

   Linear Algebraic function

Day 8: (**Python library Scipy**)

Scientific calculation with Scipy

Scipy sub package-optimization

Python package Pandas

Example of how to create a series with pandas

Vectorized operations in Series

Create Data Frame from dictionary

Handle missing values with example

 (Machine learning): Each algorithm and machine learning technique will be followed by practical example with mainly python and R programming in some cases.

Day 9:

Supervised and Unsupervised learning

Linear Regression with One Variable

Linear Regression with Multiple Variables

Logistic Regression

Day 10:

Unsupervised Learning: k-Means algorithm for clustering

Regularization

Support Vector Machines

Day 11:

Dimensionality Reduction

Anomaly Detection

Recommender Systems

Day 12:

Neural Networks: Representation

Neural Networks: Learning

Image Classification using Deep Neural Networks—A beginner friendly approach using TensorFlow