

# Data Science Training Syllabus

## Predictive Analytics and Machine learning Using python

### Introduction

Installation Guide and Interface used for class  
Basic of programming and file handling

Data Types: in Python and their usages  
Numeric, String, List, Tuple, and Dictionary

List in Python  
Creating List and Sub-list -  
Indexing and incing list  
List Manipulation  
Functions used on list

### Decision Making Statement in Python

If and nested if  
While loop  
For loop  
Break and Continue Statement

### User defined function

Manipulation using User Defined functions

Modules Introductions

“Numpy module

“Pandas module

Extraction in Python

Text file,  
Csv file,  
Excel file,

Other data files

## **Descriptive Statistics Using Python**

Central Tendency, Variability etc

Correlation

Regression

Different Regression Types

Model Validation

## **Cluster Analysis**

PCA(Principal Component Analysis)

Random Forest using Python

Support Vector machine (SVM) Gradient Boosting (GBM)

Deep learning - Neural Network (ANN)

Tableau for Analyst

Overview of Tableau

Tableau Desktop/Online/Server WhyTableau?

## **Data Preparation for Tableau**

Data Cleaning, Handling Missing Values, Formatting, applying filters etc.

## **Connecting Data from External Source**

Extractions of Data from File such as CSV, MS Excel, Access, Text file , SAS, Tableau extract etc.

Extraction of Data from a Server Such as Tableau Server etc.

## **Integrating Data**

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Marathahalli, Bengaluru, Karnataka 560067  
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Data Blending, Joining of tables

## **Visualizing your Data using Charts**

Creation of Various Charts such as Pie Charts, Bar Charts, Scatter Plots, and Combo charts etc.

Sorting, Grouping, Dual Axis, Aliases, Pivot Tables, Total Subtotals, Drill Down and Across, Trend lines, advanced options etc.

Visualizing your Data using Dashboards

Creation of Interactive Dashboards

Calculated Fields and Analytics

Combining multiple visualization Dashboards

Story Formation

Assignments and Case Study Projects:

5 Projects have to be completed