

Duration: 40 hours

Python Syllabus Overview

- **INTRODUCTION TO PYTHON**
 - Windows installation
 - Linux installation
 - Difference between Python/R
 - Data Structure
 - Architecture
- **Functions**
 - Index
 - Find
 - Lower
 - Isdigit
 - Replace
 - Strip
 - Lstrip
 - Rstrip
 - Split
 - Startswith
 - Endswith
- **Formatting string**
- **Complex data types**
 - Lists
 - Append
 - Pop()
 - extend
 - insert
 - remove
 - len
 - for loop
 - range
 - Boolean operators
 - Tuples
 - Dictionaries - mapping objects or associative arrays
- **INTRODUCTION TO NUMPY AND PANDAS LIBRARY**
 - convert series into a dictionary
 - convert dictionary into a series
 - passing indices from a list
 - check for null values
 - check for non-null values

Complete Analytics Training Institute

- lines up by index and performs operation
- naming a series
- name the index

- **Data frames**
 - copying the first few lines (including header) from the table on the webpage
 - columns
 - Rank
 - Head()/tail()
- **Index objects, Reindexing, Index hierarchy**
- **Dropping entries, Selecting entries**
- **Data alignment, Ranking and sorting**
- **Missing data**
- **Reading and writing text files**
 - Reading csv file
 - Reading txt file
 - Options in reading the files
- **Merging**
 - Many-to-many merge
 - Merging with multiple keys
 - Merge on index
- **Concatenate**
 - Concatenate with numpy
 - Concatenate with pandas
- **Combining data**
- **Reshaping data frames and Pivoting**
- **Duplicates in data frames**
- **Mapping**
- **Replacing values**
- **Renaming indices**
- **Binning**
- **Outliers**
- **GroupBy on data frames, Series and Dictionaries**
- **Data aggregation/ Data summarization**
- **Split, apply, combine**
- **Visualisation using matplotlib and seaborn**
 - Histograms and joint plots
 - Kernel density estimation (KDE) plots
 - Combining plot styles
 - Box and violin plots
 - Heatmaps
 - Regression plots