

## **R Programming**

Big Data Analytics refers to the process of collecting, organizing and analyzing large sets of data to discover patterns and other useful information from the data which can help the organizations. There are many tools which help in analyzing such data. We focus on one of the best tool for the same, i.e. using R language. With this workshop You will learn how to prepare data for analysis, compute various statistical measures, create meaningful data visualizations, create reusable R functions, create R models to predict expected future outcomes, and more!

### **Highlights:**

Learn how to customize R installation through installation of packages.

Find out how to import data into R.

Understand different R data types.

Be able to obtain descriptive statistics using R.

Learn how to produce publication quality plots.

### **Modules to be covered:**

What is Big Data & Why Hadoop?

- Big Data Characteristics, Challenges with traditional system

Introduction to R

- History of R
- An Insight into R
- Data Structure and Data Type

Data Management and Data Cleaning

- Missing Value Treatment
- Outlier Treatment
- Sorting Datasets
- Merging Datasets
- Creating new variables
- Binning variables



- Reading datasets from other environments into R ( importing )
- Writing datasets from R environment to other environments (exporting )

#### Data Visualization in R

- Bar Chart
- Dot Plot
- Scatter Plot ( 3D )
- Spinning Scatter Plots
- Pie Chart
- Histogram ( 3D ) [including colourful ones ]
- Overlapping Histograms
- Boxplot
- Plotting with Base and Lattice Graphics
- Plotting and Colouring
- Geo Charts
- Motion Charts

#### Using functions in R

- Sapply function
- Apply function
- Tapply function

#### Basic statistics in R

- Summarizing data
- Measures of Central Tendency
- Measures of Variability and Distributions
- Hypothesis Testing
- Performing Anova ( One – Way and Two – Way )



**Duration:** The duration of this workshop will be two consecutive days, with eight hour session each day in a total of sixteen hours properly divided into theory and hands on sessions.

**Fees:** Rs. 1200/- per head inclusive of all taxes