



R PROGRAMMING

Programming & development

Course Curriculum

Basic – 30 Hours

R Programming

Module 1 : Introduction to R

Introduction to R and RStudio

Overview of R Programming

Environmental Setup of R

Module 2 : Fundamentals of R

Features of R

Variables in R

Constants in R

Operators in R

Datatypes and R Objects



Module 3 : Vectors

Creating Vectors

Accessing elements of a Vector

Operations on Vectors

Vector Arithmetic

Module 4 : Control Statements

If ... else statement

If else() function

Switch() function

Loops

Module 5 : Functions in R

Formal and Actual arguments

Named arguments

Global and local Variables

Module 6 : Matrices

Creating matrices

Accessing elements of a Matrix

Operations on Matrices

Matrix transpose

Module 7 : Strings

Creating strings

Paste() and paset0()

Formatting numbers and string using format()

String manipulation

Module 8 : Lists

Creating lists

Manipulating list elements

Merging lists

Converting lists to vectors

Module 9 : Arrays in R

Creating arrays

Accessing array elements

Calculations across array elements

Module 10 : R Factors

Understanding factors

Modifying factors

Factors in Data frames

Module 11 : Data Frames in R

Creating data frame

Operations on data frames

Accessing data frames

Creating data frames from various sources

Module 12 : Data visualization in R

Need for data visualization

Bar plot

Plotting categorical data

Stacked bar plot

Histogram

Plot() function and line plot

Module 13 : STRINER Package

Important functions in stringr

Regular expressions

Module 14 : DPLYER Package

Load data into dataframe

Viewing the data

Selecting columns

Selecting rows

