



R PROGRAMMING

Programming & development

Course Curriculum

Basic – 30 Hours

Data Science with R Programming

Module 1 : Introduction to R

Introduction to R and RStudio

Overview of R Programming

Environmental Setup of R

Module 2 : Packages

R packages and libraries

Basic data manipulation in R

Module 3 : Data Import and Export

Data formats(Excel, CSV, etc.)

Reading and writing data files

Module 4 : Data Visualization with R

Data visualization principles

Creating bar chart and dot plot

Creating histogram and box plot

Customizing plots

Module 5 : Data Wrangling with dplyr

Introduction to the dplyr package

Data filtering, sorting, and summarizing

Data reshaping and pivoting

Module 6 : Data Manipulation

Merging and joining data

Data Transformation

Module 7 : Basic Statistics

Computing basic statistics

Descriptive Statistics

Data Munging Basics

Comparing means of two samples

Module 8 : Statistical Analysis with R

Linear regression

Logical Regression

Hypothesis Testing

Non-parametric tests

Module 9 : Data Cleaning

Identifying and handling missing data

Reshaping data

Module 10 : Machine Learning Basics

Introduction to Machine learning

Splitting data into training and testing sets

Supervised vs. unsupervised learning

Linear and logistic regression

Module 11 : Classification and Clustering

Decision trees and random forests

k-means clustering

Evaluation metrics for classification and clustering

