Course Name	**R Programming for Data Science & Machine Learning**
Course Duration	5 Day (40 hours)
Target Audience	Data Analyst, Business Analysts, Data Scientist
Course Outcomes	Learn R programming language and its applications in data analysis, visualization, and manipulation.
	Gain proficiency in handling various file formats like CSV, Excel, SQL, and performing web scraping using R.
	Implement machine learning algorithms in R and apply them to various data science problems.
	Develop practical skills to solve real-world data science problems using R.

Module	Content
Module 01: Introduction to R Basics	
1.1	Introduction to R Programming Basics
1.2	Arithmetic, Variables, and Basic Data Types in R
1.3	Vector Basics, Operations, Comparison Operators, Indexing, and Slicing in R
Module 02: R Matrices	
2.1	Introduction to R Matrices
2.2	Creating, Arithmetic, Operations, Selection, and Indexing in R Matrices
2.3	Factor and Categorical Matrices in R
Module 03: R Data Frames & Lists	
3.1	Introduction to R Data Frames
3.2	Data Frame Basics, Indexing, Selection, and Operations in R
3.3	List and its Operations in R
Module 04: Data Processing with R	
4.1	CSV Files, Excel Files, SQL, and Web Scraping with R
Module 05: R Programming Concepts	
5.1	Introduction to R Programming Concepts
5.2	Logical Operators, Conditional Statements, Loops, and Functions in R
5.3	Built-in R Features, Apply Functions, Math Functions, Regular Expressions, and Dates/Timestamps in R
Module 06: Data Manipulation & Data Visualization with R	
6.1	Data Manipulation Overview, Dplyr, Pipe Operator, and Tidyr in R
6.2	Overview of ggplot2, Histograms, Scatterplots, Bar plots, Box plots, and 2 Variable Plotting in R

6.3	Coordinates, Faceting, Themes, and Overview of Plotly and Interactive Visualizations in R
Module 07: Supervized Machine Learning with R	
7.1	Introduction to Machine Learning
7.2	Regression Algorithm: Simple Linear Regression
7.3	Regression Algorithm: Multiple Linear Regression
7.4	Assumptions of Multiple Linear Regression
7.5	Classification Algorithms: K-Nearest Neighbours
7.6	Classification Algorithms: Decision Trees and Random Forests
7.7	Classification Algorithms: Support Vector Machines
Module 08: Unsupervized Machine Learning & Deep Learning with R	
8.1	K-Means Clustering
8.2	Natural Language Processing
8.3	Deep Learning Concepts using Neural Networks in R