



# Data Mining with R

## Training Details

Training Time	:	1 Day
Capacity	:	10
Prerequisites	:	There are no prerequisites for this course.

## About Training

### About Training

With the advent of big data, there is an increased focus on data mining and the value that can be derived from large data sets. Data mining is the process of selecting, exploring, and modeling large amounts of data to uncover previously unknown information for business benefit.

R is an open source software environment for statistical computing and graphics and is very popular with data scientists. R is being used for data analysis, extracting and transforming data, fitting models, drawing inferences, making predictions, plotting, and reporting results. Learn how to use R basics, working with data frames, data reshaping, basic statistics, graphing, linear models, non-linear models, clustering, and model diagnostics.

### What You'll Learn

- How to configure the RStudio environment and load R packages
- How to use R basics such as basic math, data types, vectors, and calling functions
- How to use advanced data structures such as data frames, lists, and matrices
- How to use R base graphics
- How to use R basic statistics, correlation, and covariance
- How to use linear models such as simple linear regression, logistic regression
- How to use non-linear models such as decision trees and Random Forests
- How to apply clustering using K-means
- How to complete model diagnostics

## Who Should Attend

Anyone interested in learning to use data mining techniques to find insights in data and who has at least some statistical and programming experience.

## Outline

### Modules:

- Introduction to RStudio
- R Basics
- Introduction to Data Mining in R
- Classification and Clustering Models in R
- Summary

### Module 1 Overview

- What is R?
- What is RStudio?
- Why use RStudio?
- Navigating RStudio
- What are packages?
- How to install packages
- Hands-on Exercises

### Module 2 Overview

- R Math
- Data Types
- Working with Data
- Loading Data
- Writing Data
- Data Structures
- Hands-on Exercises

### Module 3 Overview

- Overview of Data Mining and Data Science
- Exploratory Data Analysis
- Base Graphics in R
- Linear Regression
- Logistic Regression
- Hands-on Exercises

### Module 4 Overview

- Decision Trees
- Clustering
- Model Diagnostics
- Hands-on Exercises

### Module 5 – Summary

- Skills Review

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