

R Training

Module 1: Fundamentals of “R”

First steps with R
Discover the data types & variable in R
Installing R on personal machines. retrieving R packages
Basics of R, R-Studio, R Markdown.
Data types, variable assignment.

Module 2: Vectors

Analyze gambling behaviour using vectors. Create, name and select elements from vectors.
Comparing Vectors
Selection from Vectors
Sorting of Vectors

Module 3: Matrices

Work with matrices in R.
Computations with matrices
Demonstrate your knowledge by analyzing the any data figures.
Comparing Matrices
Selection from Matrices
Sorting of Matrices

Module 4: Factors

R stores categorical data in factors.
Learn how to create subset and compare categorical data.
Comparing Factors
Selection from Factors
Sorting of Factors

Module 5: Data Frames

Learn how to create data frames
Data sets and structure
Selection from data frames
Sorting of data frames

Module 6: Lists

Learn how to create list
list and data structure
selection and Sorting from/of list

Module 7:

If/else statements.
For/while loops.
Functions
apply() family over data.
Utilities like with(), grepl(), sub() to specify environment.

Module 8:

Writing Functions in R
A quick refresher for functions
Functional programming
Advanced inputs and outputs
Robust functions

Module 9: Importing Data into R

Importing data from flat files
Importing data from Excel
Importing data from Databases
Importing data from the web

Advanced "R"

- ADVANCED "R" & DATA VISUALIZATION
- STATISTICAL MODELLING
- MACHINE LEARNING

ADVANCED "R" & DATA VISUALIZATION

Module 1: Data Visualization -GGPLOT2 (Part-1)

The Grammar of Graphics
Lines and Syntax
Transformations
Interactivity and Layers
Customizing Axes, Legends.

Module 2: Data Visualization -GGPLOT2 (Part-2)

Data Visualization with ggplot2
Introduction & Data
Aesthetics
Geometries
qplot and wrap-up
Statistics
Coordinates and Facets
Themes

Data Visualization - Best Practices & Case Study

STATISTICAL MODELLING

Intro to Statistics with R:
Histograms and Distributions
Scales of Measurement
Measures of Central Tendency
Measures of Variability

MACHINE LEARNING

Introduction to Machine Learning

- Supervised Learning
- Unsupervised Learning
- Semi-Supervised Learning

Performance measures
Classification
Regression
Clustering

Pre-requisites

None