

Data Analysis with R

Description

R has a rich set of libraries that can be used for basic as well as advanced data analysis tasks. If you have a basic understanding of data analysis concepts and want to take your skills to the next level, this course is for you. The aim of this training is to teach the R language by applying with real data and to prepare those who want to pursue a career in data science in accordance with the needs of the business world. Participants who complete the training will be able to do business both in R language and in data pre-analysis, processing and visualization.

Delegates will learn

- Access to the file system with R
- R variables, memory, workspace
- Native data types
- Variable subsetting
- Flow control
- Functions
- Data import and export methods
- Data visualization with R

Audience

- Those who want to develop their careers in data science.
- Those who want to deepen and differentiation the data analysis technique in their researches and projects.

Outline

Introduction to R

- Introduction to R language (free software, matrix language, package system, writing R function to other languages)
- R help system
- Access to the file system with R
- R variables, memory, workspace
- Missing observations
- Homework with practical exercises

Native data types

- vector system
- digital vectors
- character vectors
- logical vectors and operators
- category (factor)
- data frame - csv files
- list - json files
- Homework with practical exercises

Variable subsetting (subsetting)

- subsetting with boolean variables
- subsetting with numeric insets
- subsetting with observation names
- deleting observation
- assigning to variable subset
- Homework with practical exercises

Flow control

- Conditional flow (if)
- Matrix loops (with index and apply*)

Functions

- Modular programming
- Rules for writing consions in R
- R's "formula" system
- Homework with practical exercises

Data import and export methods

- Csv
- Json
- Xml
- pulling data from http APIs
- Homework with practical exercises

Data visualization with R

- principles of creating charts for data analysis
- base R graphics system
- Homework with practical exercises

Prerequisites

There is no prerequisite for this course.