

R Language Course Structure

Introduction to R

- R as a language
- Working with data in R

The R ecosystem

- Why use R?
- Getting started
- Installation and setup
- Packages

Data types

- Character
- Factor
- Integer
- Float
- Date and time

Data structures

- Vectors
- Matrices
- Lists
- Data frames

Data handling

- Importing data from multiple sources/formats like .csv, .txt, .xlsx, SAS and SPSS files
- Exporting data to multiple formats
- Handling data frames: filtering, sorting, merging
- PLYR package for easy data manipulation

Functions

- Commonly used built in functions
- Writing user defined functions
- Installing packages

- Looping functions
- The "apply" family of functions
- Basic visualization

Basic statistics in R

- Distributions
- Testing
- Modeling

Graphics in R

- Graphics for exploratory data analysis
- Standard graphic displays

The R environment

- R in the cloud

Statistical analysis with R

- Linear models
- Generalized linear models

Advanced statistical modeling with R

- Density estimation
- Survival analysis
- Classification
- Clustering

Introduction to Writing R Packages Integrating with other tools.

- Tableau
- Python
- CPP

Real time problems.

Data manipulation with data.table package.

Interview questions.