DATA SCIENCE WITH R

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OVERVIEW AND FINAL GOALS

Here's what you'll find in this lesson:

1. Brief introduction to **R** as a statistical program language.
2. **R** and Integrated Development Environment (IDE): **RStudio**.
3. **R** essentials:
    a. Comments,
    b. Mathematical basic operations,
    c. Creating objects,
    d. Brackets,
    e. Data structures,
    f. Relational operators,
    g. Control structures,
    h. Functions.

R

Overview, applications and what is used for

WHAT IS R

R is a language and environment for statistical computing and graphics.

It is a GNU project developed at Belly Laboratories (formerly AT&T, now Lucent Technologies) by Ross Ihaka and Robert Gentleman.

R provides a wide variety of statistical (linear and nonlinear modeling, classical statistical tests, time-series analysis, classification, clustering, etc.) and graphical techniques. It is an Open Source free software accessible by everyone and may be considered one of the routes to participate in research in statistical methodology.

R has a command line interface and one of his strengths is the ease with which well-designed publication-quality plots can be produced. Users have created packages to augment the functions of the R language and multiple third-party Graphical User Interface (GUI) are also available, such as Rstudio.

https://www.r-project.org/about.html - https://en.wikipedia.org/wiki/R_(programming_language)

Ross Ihaka - Source: Wikipedia

Robert Gentleman - Source: Wikipedia

RStudio

What is an IDE?

IDE - INTEGRATED DEVELOPMENT ENVIRONMENT

An (Integrated Development Environment) IDE is a software suite that combines the main development tools for coding software into a single graphical user interface.

For R there the most used IDE is RStudio, another open source software where it is possible to share the source code to make improvements created by the community.

In RStudio there are these built-in tools:

- a text editor
- a compiler
- a debugger
- an interpreter
- build automation tools
- a syntax highlighter
- ...

A ***compiler*** translates the source code into object code.
An ***interpreter*** directly executes the source code without needing to translate it.

R essentials

Basic introduction to the statistical program language R

TOPICS

List of topics to be covered:

a. Comments,
b. Mathematical basic operations,
c. Creating objects,
d. Brackets,
e. Data structures,
f. Relational operators,
g. Control structures,
h. Functions.

Let’s work on R!

THANK YOU FOR YOUR ATTENTION