

## Standards of programming in R

### Getting to Know RStudio

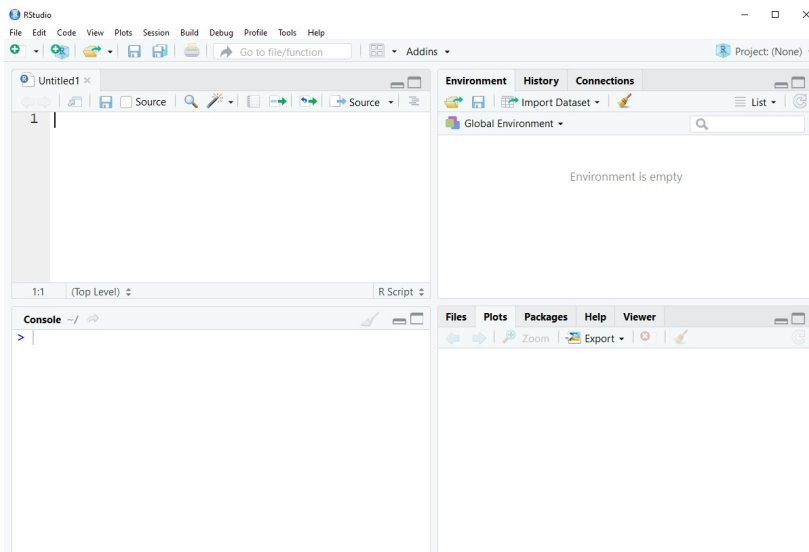
Veronika Bendová<sup>1</sup>, Stanislav Katina<sup>1,2</sup>, Markéta Janošová<sup>1</sup>

<sup>1</sup>Institute of Mathematics and Statistics, Masaryk University

<sup>2</sup>Honorary Research Fellow, The University of Glasgow

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- RStudio is an integrated development environment (IDE) for R
- Keyboard Shortcuts using – Ctrl/Alt (Win, later we use Win as an example), Cmd/Option (macOS), for details see, e.g. [Rstudio-cheatsheet](#)
- **After starting RStudio create new RSkript**
  - File → New File → R Script (Ctrl+Shift+N)
- **Set R Studio appearance**
  - Tools → Global Options → Appearance
- **Restart R Session** (all manually loaded packages will be unloaded)
  - Session → Restart R (Ctrl+Shift+F10)
- **Clear Workspace** (remove all loaded datasets and defined objects)
  - Session → Clear Workspace
- **Clear Console** (delete all commands and outputs displayed)
  - Ctrl + L



R Studio environment is divided into four sections:

- 1 **Code editor** (top left)
  - Environment for creating your own code
  - Click on button Run or press Ctrl + Enter for running (a part of) the code
- 2 **Workspace** (top right)
  - Environment – list of loaded datasets, defined objects (variables) and defined functions
  - History – list of all commands, which were run in the past
- 3 **Console** (bottom left)
  - Environment, where executed commands and their outputs are displayed
- 4 **Plots** (bottom right)
  - Files – provides a list of files in selected folder
  - Plots – shows a preview of plotted graphs
  - Packages – allows installing new packages and displays a list of installed packages, which can also be loaded and unloaded from here
  - Help – interactive help environment

*Note:* The above mentioned sections could be rearranged and also their number could be changed from 2 to 4 (based on your preferences).

### 1 Create new R project

- File → New File → R Script (R)
- File → New File → R Sweave (pdf)
- File → New File → R Markdown (HTML, Word, pdf)

### 2 Set the folder, where the R Script is located, as working directory

- Session → Set Working Directory → To Source File Location

### 3 A good project layout

- Integrity of data
- Portability of the project
- Easier to pick the project back up after a break

### 4 Directory layout (example)

- Folder "Project\_name"
- Subfolders "R\_Scripts", "Data", "Docs", "Figures", "Outputs"

### 1 RStudio project

<https://support.rstudio.com/hc/en-us/articles/200526207-Using-Projects>

### 2 Designing RStudio projects

<https://nicercode.github.io/blog/2013-04-05-projects/>

### 3 Paper about designing projects

<http://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1000424>

### 4 A meaningful structure for RStudio project

<https://www.inwt-statistics.com/read-blog/a-meaningful-file-structure-for-r-projects.html>