Computational Bootcamp 2: Intro to R

Ankushi Mitra

Department of Government
Georgetown University

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What We'll Be Covering Overall

1. Software installation, file management
2. Basics of R: data structures, writing code, creating objects, packages
3. R: working with datasets
4. More R: data cleaning, visualization
5. LaTex: producing documents with Markdown and Overleaf

What We'll Be Covering Today

1. Basic Steps of Data Analysis

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5. Packages in R

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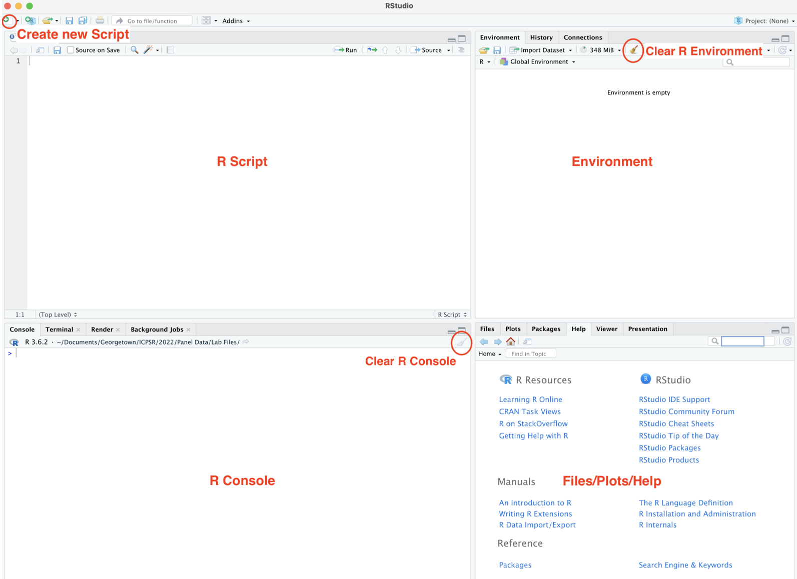

Create new Script

Clear R Environment

R Script

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Clear R Console

R Console

Files/Plots/Help

Environment is empty

R 3.6.2 · ~/Documents/Georgetown/ICPSR/2022/Panel Data/Lab Files/

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  - Most data contains at least numeric information and character information. That is why we don't usually use matrices.

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  - *Data Frames* and *Tibbles* are what you will usually use. They are a tabular data structure in R, similar to a spreadsheet or a database table. They can store different types of data (e.g., numeric, character) in columns. Each column is a vector, and all columns must have the same length.

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- Example
  - Inspect R's built-in dataset, *mtcars*

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b <− 6 − 6 − 6
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mean(a, b)
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- Documentation for functions can be easily accessed by prefacing the function name with ? and dropping the (). The documentation typically includes a description, a list of the arguments, references, a list of related functions, and examples. The examples are incredibly useful. For example: ?mean

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  - It is a good idea to include library() statements at the top of scripts for each package used in the script. This way it is obvious at the top of the script which packages are necessary.