Journey through R - A motivating workshop by Julius Fenn (PhD candidate in the Cognition, Action, and Sustainability department Freiburg)

To Dos in advance

To participate in the workshop, you need to install base R and R Studio: https://posit.co/download/rstudio-desktop/

And prepare yourself:

- At best you should have a basic understanding regarding the following concepts statistical concepts: *Mean, variance, standard deviation and basic principles of hypothesis testing and multiple linear regression;*
- and have a basic understanding of R objects and classes (e.g. have a look at the following online course: https://www.datacamp.com/courses/free-introduction-to-r)
    - You can sign up for https://education.github.com/pack to get free access to datacamp and multiple other resources
- Additionally you can have a look at the recommended learning materials (start reading first section "Possible Learning Process"): https://docs.google.com/document/d/1Z40Rkux_Ysq15VziCJJH21ca07ipwN52dA_LFYIsZ2g/edit?usp=sharing

Location + Register
Psychologie Hörsaal in Engelbergerstr. 41c, 79106 Freiburg
- Friday, the 10.05.; starting at 1pm (ct) till about 6pm
- Saturday, the 11.05.; starting at 9am (ct) to about 4pm
Please **register to my workshop** till the 8th of April by answering the google form:
https://forms.gle/DN1Z6HVxKg8XnhVG6

Table of Contents introductory workshop in R / R Studio [could slightly change!]

- Part 1:
    - Definition statistics, Statistician vs. Data Scientist
    - Motivating why to learn programming
- Part 2:
    - Presenting useful software for students & PhDs
    - Knowledge Management
- Part 3:

    1. Setting up a project
    2. Objects
    3. Data Structures
    4. Subsetting
    5. Flow Control
    6. Writing Functions
    7. File and Data Management
    8. Adding Packages + recommendations for central packages

- Part 4:
    - typical analyses sequences in action
        - *descriptive summary statistics (short)*
        - *hypothesis tests (in detail)*
        - *multiple linear regression (in more detail)*
    - Bibliometrix (*application of quantitative analysis and statistics to publications*)
- Part 5:
    - Presenting provided templates