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)
- 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

Bernstein-Hörsaal in Hansastraße 9A, 79104 Freiburg
- Friday, the 5.05.; starting at 2pm (ct) till about 6pm
- Saturday, the 6.05.; starting at 9am (ct) to about 4pm

Please **register to my workshop** till the 26th of April by answering the google form:
https://forms.gle/cAZi7aUkQ9ENDzLq7

Table of Contents introductory workshop in R / R Studio

- 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