

Workshop as part of the Teaching Assistantship Programme 2021

## Introduction to data manipulation and visualization in R

### Organizational details

Instructor: Hieu Thieu

Date: 14<sup>th</sup> July, 2021, from 2 pm to 6 pm

Location: Online (link will be sent in advance to the workshop)

### Content

This hands-on workshop will introduce participants, who have no previous experience with R, to fundamental steps of data manipulation and visualization using two powerful packages: **dplyr** and **ggplot2** in R. The workshop will begin with a brief introduction about **R & Rstudio**, the free but very powerful tools for data manipulation, visualization, and analysis. Then, participants will learn and practice how to clean and import the raw data into R. They will continue with learning and practicing data manipulation with filtering, sorting, and summarizing... a real dataset through the **dplyr** package. Finally, participants will learn and practice the essential skill of data visualization using the **ggplot2** package to turn a processed dataset into informative graphs. By the end of the course, participants will be able to use the **dplyr** and **ggplot2** packages together to produce descriptive graphs including scatter plots, line plots, bar plots, histograms, boxplots ...which enable them to answer exploratory questions and to understand the value of exploratory data analysis.

### Learning Targets

By the end of this workshop, participants will be able to

- gain a deep understanding of the process of data manipulation and visualization for novice R users
- use the **dplyr** and **ggplot2** packages in R to step by step manipulate and visualize their real datasets.

### Target group

Students, Doctoral Candidates, and Postdocs of all Faculties

**Course language**

English

**Registration**

Please register **by 4<sup>th</sup> July, 2021** via e-mail at [info@ggs.uni-giessen.de](mailto:info@ggs.uni-giessen.de).