

Online Workshop

[Online] PCMO@GGG Workshop: “Visualizing Data with R”

Organizational details

Instructor:	Dr. Paul C. Bauer
Date:	March 20 & 21, 2025, 10.00 am – 3.30 pm respectively
Location:	Online via BigBlueButton
ECTS:	2
Max. number of participants:	15

Objectives

By the end of the course participants will...

- ...know the key concepts underlying the grammar of graphics.
- ...be able to read complex graphs.
- ...be able to critically assess graphs on different dimensions of quality.
- ...be able to use various plots for exploratory and presentational/explanatory purposes.
- ...learn how to map data dimensions to visual dimensions.
- ...learn how to use the popular R package ggplot2 to visualize graphs.
- ...understand the potential of interactive graphs.
- ...learn how to generate simple interactive graphs using ggplot2 and plotly.

Content & Methods

Organizational structure of the workshop

Session	Topic
I	Day I
1	Introduction: Why look/visualize?
2	Quality: What makes a good/bad graph?
3	Ggplot2 & grammar of graphics I
4	Ggplot2 & grammar of graphics II
II	Day II
5	Ggplot2 & grammar of graphics III
6	Ggplot2 & grammar of graphics IV
7	Visualization for description
8	Visualization of statistical models

Method: The course objectives will be attained through a combination of lectured content, group discussion, interactive exercises and R coding exercises.

Target group & Course Language

The course is aimed at postdocs and doctoral candidates at the GGS.

Participation requirements:

- Basic knowledge about Methods & Statistics; practical exercises on Methods & Statistics in R (e.g., regression analysis, t-tests, distributions, frequentist statistics).
- Basic knowledge of R (and R packages such as dplyr), either because of previous work in R or through self-study, e.g. on DataCamp (access to DataCamp is organized before the course for the course duration). We'll rely on R and RStudio in the workshop. Specifically, we will use data management functions from the tidyverse. If you lack this knowledge, you should do the following courses on Datacamp: Introduction to the Tidyverse (Dplyr): Chapter 1 (Data wrangling) & 3 (Grouping and summarizing)

Course language: English

About the instructor:

Paul C. Bauer is a researcher at the LMU Munich (Institute of Statistics) and the University of Freiburg (Institute of Political Science) and works in the field of political sociology and methodology. His current projects comprise predicting elections using Google trends, using supervised and unsupervised machine learning models to analyze open-ended audio questions and tweets, and exploring the usefulness of ideal experiments for research. His work has appeared in Political Communication, Public Opinion Quarterly, Political Behavior, PLOS One, and the European Sociological Review and he regularly teaches workshops and seminars on data visualization.

Registration

If you want to participate in the course, please register via email to postdocs@ggs.uni-giessen.de by **March 6, 2025**.