



Workshop: Shiny Apps in R
Instructor: Dr. Fabian Zehner (DIPF | Leibniz Institute for Research and Information in Education, Frankfurt am Main)
Date: Thursday, 29.02.2024, 9:00 – 17:00 h

Abstract

Content.

In this workshop, participants will learn the fundamentals of how to build Shiny apps in R and gain valuable insight into practical matters, such as debugging. Shiny apps facilitate the development of interactive graphical user interfaces (GUIs) specifically designed for statistical analysis and visualization in R. With great possibilities for visualization and dynamic manipulation of parameters, such apps are often used for educational or demonstration purposes, sometimes dashboards or reporting, but can even be used for building complex software.

The workshop will introduce participants to the most important concepts using practical hand-on tasks throughout:

- development environment
- static and dynamic input and output user interface (UI) elements and their layout
- the local Shiny server for processing user input and generating output
- reactive variables
- debugging
- interactive output: data tables and plotly
- tailoring UI look and behavior via CSS and JavaScript

Finally, the workshop will briefly touch on how to deploy the app to users. Therefore, the workshop will enable participants to understand the inner workings of Shiny apps, to build them for their projects, and tailor them beyond basic Shiny capabilities.

Prerequisites.

Solid R skills are required.



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Literature.

- Wickham, H. (2021). Mastering Shiny: Build Interactive Apps, Reports, and Dashboards Powered by R. O'Reilly. <https://mastering-shiny.org/>
- Plotly Reference: <https://plotly.com/r/reference/>
- DataTables Manual: <https://datatables.net/manual/>

Software.

- Participants need to bring their own laptop with recent versions of R and RStudio installed.
- R packages (also to be installed upfront): shiny, shinythemes, shinyjs, shinycssloaders, plotly, DT