Introduction to Data Visualisation in R
Lauren Ackerman

Cognitive linguistics, like any field that includes experimental methodologies, requires the ability to communicate very complex data to a broad and diverse audience. This skill is not trivial, although it is rarely taught. In order to make clear, concise visual representations of data, a researcher must understand the principles behind visual communication, as well as have the tools to create such images.

In this pre-conference workshop, I propose delivering a tutorial on data visualisation in R, focusing on using dataviz as an analytical tool (thereby supplementing statistical analysis) and discussing best practices for clear, effective visual communication. This tutorial requires a prior basic familiarity with R and some confidence in looking up R code solutions and troubleshooting. However, it will be aimed at novice users who are looking to build skills and confidence in R. Attendees will leave with a deeper understanding of how aesthetic choices influence both the message and the communicative efficiency of their visualisations.

In the first half, I will introduce the Tidyverse and very basic data manipulation. During this time, attendees will learn about how the structure of a dataset can be changed to best suit their analytical purposes. I will then introduce `ggplot2` and other plotting methods in R, with a focus on what types of graphs communicate what information. This will highlight how the aesthetic and functional choices made in visual presentation of data are crucial to effective communication. In the second half, attendees will be given 'challenges' to complete in small groups. These challenges will bring together the skills learned in the previous two hours and a real-world data visualisation problem. Each group will be given a linguistic dataset and at the end of the hour, we will (gently) evaluate the effectiveness of each graph.