

Data visualization

There are several great resources out there on the world wide web for learning how to create figures in R. They do a thorough job of introducing the basics. The simple (but sometimes not so simple) mechanics of moving from data to a figure. In particular, I recommend, the [Data Visualization Chapter](#) of R for Data Science. It is a great place to get started with a narrative introduction to ggplot. As you make more ambitious figures, [ggplot2: Elegant Graphics for Data Analysis](#) will provide you with even more detail. Similarly, the [R Graphics Cookbook](#) provides useful solutions to common problems (*e.g.*, [changing the order of items on a categorical axis](#)).

However, this workshop is not intended to replace that kind of book. Instead, it is designed to focus on the soft skills of data visualization. What are a few small changes that I can make to take this figure from workable to shareable, or even better, from something that I have to squint at to something that speaks for itself.

Fundamentals of Data Visualization

Much of the content of this workshop is inspired by the approach in **Fundamentals of Data Visualization** by Claus O. Wilke. You may recognize these initials if you have tried to arrange a multi-panel figure in R with `cowplot::plot_grid()`. I can't recommend this book highly enough. I will consider this workshop a success even if the only thing you get out of it is reading this book.

The mechanics of plotting are important. They are how you create the figure after all. But at the end of the day 99% of readers won't see how you created the plots¹, they will only see the final image you produce. That image is your chance to capture their attention with your data. Make it count.

A note on structure

The structure of this workshop will be to take some data. Explore it and slowly refine our way to a good figure. Therefore the first figures that we make will be a little ugly and will violate some

¹Shhh! Don't tell that to Chapter 1 of this workshop.