

# By the end of today you will...

- Understand the basics of how to interact with the RStudio environment.
- Understand the structure of data frames (and how you can start to manipulate them), how graphing functions like `ggplot` work with data frames, and how to plot some basic graphs.
- This will give you the foundation for tidying your data, visualising your data, and building models (e.g., AN(C)OVA (GLM), moderation and mediation in regression, and linear mixed models).

# Why R?

- R allows you to engage in reproducible research.
- Statistical packages in R reflect the latest advances in the fields of Statistics and Data Science.
- Advanced models such as Linear Mixed Models (LMMs) are easy to build in R - many of the best journals now require LMMs to be used as they are more powerful and flexible than classical techniques such as ANOVA.
- Lots of amazing data visualisation packages available.
- In many institutions, the next generation of academics (M-level and PhD students, post-docs etc.) are learning R skills as part of their training.
- Plays an important role in Open Science.