

## Key topics from R bootcamp

### Basics

- basic commands
- variables
- installing packages
- updating packages
- working directory setup
- data types
- basic mathematics and linear algebra
- factors
- conversions
- file I/O

### Dplyr techniques

- tibbles vs dataframes
- pipes
- select
- filter
- arrange
- mutate
- summarize
  - missing values
  - counts
  - other useful summary functions
- group\_by
- joins
- dates and times (lubridate)

### More on manipulating data

- apply and its relatives
- spread, gather, separate, and unite
- sampling
- summarizing missing values
- imputation
- strings and regular expressions

### Visualization

- ggplot2
- Layers:
  - Data
  - Aesthetics
  - Geometry

- Statistics
  - Facets
  - Scales and coordinates
- Special cases
  - histograms
  - line plots
  - bar plots
  - density plots
  - time series
- themes
- plot I/O