Conclusion to Tidyverse

Athanasia Monika Mowinckel

Sept. 15th 2020
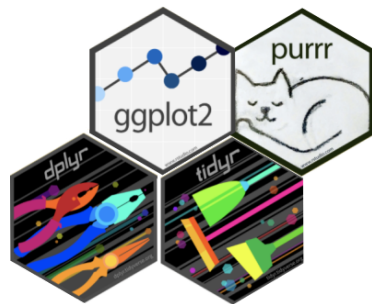
- **Introduction to** tidyverse **concepts** (15 minutes)

- **Tidy data wrangling** - with translations to base-R (~ 2 hours)

  - plotting data with ggplot2 (~25 min)
  - sub-setting data with dplyr (~25 min)
  - chaining commands with the pipe `%>%` (~10 min)
  - adding and altering variables with dplyr (~25 min)

- **Lunch break** (30 min)

- **Tidy data reshaping & summaries** - avoiding loops (~ 1.5 hours)

  - pivoting data with tidyr (~25 min)
  - grouped summaries with dplyr (~25 min)
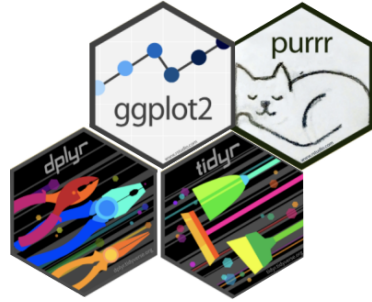 - working with nested data using purrr (~25 min)

The packages

Covered here

Package	Functions
dplyr	data manipulation - altering and adding variables in a dataset
tidyr	data tidying - changing data shape and structure
ggplot2	data visualisation
purrr	Enhancements on functional programming

The packages

Covered here

Package	Functions
dplyr	data manipulation - altering and adding variables in a dataset
tidyr	data tidying - changing data shape and structure
ggplot2	data visualisation
purrr	Enhancements on functional programming

Not covered

Package	Functions
readr	easy and fast importing of data
tibble	variations on the R data.frame
forcats	working with factors/categorical data
stringr	working with strings/characters

grammar of data manipulation

provides a consistent set of verbs that help you solve the most common data manipulation challenges:

- `select()` picks variables based on their names.
- `filter()` picks cases based on their values.
- `mutate()` - adds or alters variables that are functions of existing variables
- `summarise()` reduces multiple values down to a single summary.
- `arrange()` changes the ordering of the rows.

Combined with functions like

- `group_by()` - Group the data set by variables
- `nest_by()` - Nest data by columns
- `across` - Apply functions across multiple columns

Tidy-selectors like:

- `contains()` - select by variables containing a string
- `starts_with()` - select by variables starting with a string
- `ends_with()` - select by variables ending with a string

follow me: @DrMowinckels
Read my blog: DrMowinckels.io