

# Rstudio Projects and RMarkdown

Simon Farrell

9 July 2016

# Rstudio projects

- Make it easier to switch between contexts/work projects
- Simon will show you how to do it

# Help

<https://support.rstudio.com/hc/en-us/articles/200526207-Using-Projects>

(or, of course, using Google/Duckduckgo/Bing)

# But what actually *is* a project?

(From docs): When a project is opened within RStudio the following actions are taken:

- A new R session (process) is started
- The .Rprofile file in the project's main directory (if any) is sourced by R
- The .RData file in the project's main directory is loaded (if project options indicate that it should be loaded)
- The .Rhistory file in the project's main directory is loaded into the RStudio History pane (and used for Console Up/Down arrow command history).

# But what actually *is* a project?

- The current working directory is set to the project directory.
- Previously edited source documents are restored into editor tabs
- Other RStudio settings (e.g. active tabs, splitter positions, etc.) are restored to where they were the last time the project was closed.

# R Markdown

# R Markdown

- One slide summary: you can write notebooks, presentations and even entire papers in Rstudio
- Prepare for awesomeness...



# A little behind the scenes

- Markdown is a simple text-based syntax, originally developed (by John Gruber) to make writing blog posts etc. easier
- R Markdown is mostly reliant on syntax of pandoc, a cross-format converter
- You can use pandoc outside of Rstudio and R Markdown
- R Markdown adds some useful features that extend pandoc-flavoured markdown



# A key library: knitr

- Converts r code to html/pdf/word
- Rmd -> md -> whatever (PDF/word/html)
- Let's look at some examples (notebook, markdown presentation, papers)

# Conversion

- HTML conversion should work out of the box
- PDF will require LaTeX installation (you probably want to do this at home, or late at night)
- Word should also work out of the box (...?)

# Two useful packages

- [Bookdown](#): wikis, papers etc
- [Papaja](#) (not on CRAN): APA6 papers

# Summary

Pandoc/RMarkdown allows

- Writing reports, allowing intermixing of code, tables/figures, and descriptive text
  - Great for supervisors and collaborators
- Generation of presentations and papers using simple markup format
- Citations (using bibtex format, can be generated from most bib managers)
- R chunks
- Include outside figures
- Themes
- Downside: many moving parts, difficult for novice to identify point of failure

# Further reading

<https://rmarkdown.rstudio.com>

