# Writing Manuscripts in Rmarkdown

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## What is Markdown? What is Rmarkdown?

- **Markdown** a way to write text focussing on content, rather than formatting.
- **Rmarkdown:** a version of markdown that allows a user to incorporate R script.

## Why use RMarkdown?

Using Rmarkdown allows researcher to link the manuscript and the codes directly.

### Advantages

- focus on text, not on formatting

  - clean
  - less fiddly (most of the time)

- Reproducible

- Quick

  - automates a lot of the manual labour that goes in manuscript preparation
  - links to scripts

- Less scope for error

- open source

- customisable

- under development

- writing becomes part of the process, not an afterthought

  - a place where the entire project comes together

### Distadvantages

- can sometimes be fiddly
  - yaml
  - directories
- Not currently supported by journals
- under development
- collaborating functions are still somewhat underdeveloped
  - though git is a potential solution

### When is it most effective?

- When analyses are repeated
- if the focus is on code / science

# How to use Rmarkdown

### What do you need?

- Rstudio (and its visual viewer)

Possibly necessary?

- rmarkdown package
- knitr package
- pandoc (an app that converts documents)
- tinytex (or equivalent) to render to pdf (latex look)

### How to write?

- Any text editor
  - I prefer Rstudio text editor

# Document Structure

### YAML

= document metadata

- Author, date

- document properties

  - font, line width

- output type

  - html

  - pdf

  - word

### Code

- data and code
- code chunks (don't have to be visible)
- can be any kind of code (R, Python etc)
- in text r code
  - useful for important numbers (e.g. n = XX)
  - can be converted to text

### Text

- basic text

- citations

  - works with Mendeley, Zotero, (Endnote is tricky)

## MISC

- Rticles package

## Useful References:

- https://www.youtube.com/watch?v=kC6JFcM5e9M
- https://stirlingcodingclub.github.io/Manuscripts_in_Rmarkdown/Rmarkdown_notes.html