4 Rmarkdown

Markdown is a particular type of markup language that is designed to produce documents from text.

Markdown is becoming a standard. Many websites will generate HTML from Markdown (e.g. GitHub, Stack Overflow, reddit, ...) and this course website is written in markdown as well.

Markdown is easy for humans to read and write.

```
*italic*
**bold**
```

```
# Header 1
## Header 2
### Header 3
```

```
* Item 1
* Item 2
    + Item 2a
    + Item 2b
```

```
1. Item 1
2. Item 2
3. Item 3
    + Item 3a
    + Item 3b
```

```
[linked phrase](http://example.com)
```

```
A friend once said:
```

```
> It's always better to give
> than to receive.
```

Rmarkdown is an authoring format that lets you incorporate the results from `R` code in your documents.

It combines the core syntax of markdown with embedded `R` code chunks that are run so

their output can be included in the final document.

You no longer have to copy/paste plots into your homework!

Documents built from Rmarkdown are fully reproducible, i.e. they are automatically regenerated whenever embedded `R` code changes.

To include an `R` chunk in an Rmarkdown document, you use backticks.

In order to create a new Rmarkdown document in RStudio, File > New File > R markdown.

There are many options that can affect the aesthetics of the resulting document and the results and appearance of R chunks. For a list of chunk options, see https://yihui.name/knitr/options/. Here are some useful ones:

- `echo` - should the code be printed?
- `message` and `warning` - should message and warnings be printed?
- `eval` - should the code be evaluated?
- `fig.height` & `fig.width` - figure height and width
- `fig.cap` - figure caption

Your Turn

1. Create a new Rmarkdown document.

2. Alter the template to use a `ggplot2` figure and specify the size to be a height of `6`.

3. Add a caption to your figure.

4. Compile your document to pdf.

4.1 Additional resources

Documentation and cheat sheets (https://rmarkdown.rstudio.com)

R Markdown: The Definitive Guide (https://bookdown.org/yihui/rmarkdown/)