A Minimal Book Example

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2023-01-06

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Chapter 1

Some Furman Fun

1.1 On today's agenda

- Vaccines
- Stanford
- Stanford's President
- Target
- Dataset 1 (means and correlation)
- Dataset 2 (healthcare; my numbers are in the wrong place)
- Dataset 3 (NFL)
- See if we've had fun

Chapter 2

Dataset 1

2.1 About this data

```
#> # A tibble: 6 x 3
#>   group     x     y
#>   <int> <dbl> <dbl>
#> 1    13  65.8  95.6
#> 2    13  65.7  91.9
#> 3    13  39.0  92.3
#> 4    13  37.8  93.5
#> 5    13  35.5  89.6
#> 6    13  39.2  83.5
```

2.2 More about this data

```
#> # A tibble: 13 x 2
#>    group     n
#>    <int> <int>
#>  1     1   142
#>  2     2   142
#>  3     3   142
#>  4     4   142
#>  5     5   142
#>  6     6   142
#>  7     7   142
#>  8     8   142
#>  9     9   142
#> 10    10   142
```

```
#> 11    11   142
#> 12    12   142
#> 13    13   142
```

2.3 Some fun data for you

```
knitr::kable(q1, align = "ccc")
```

group	x	y
13	65.81554	95.5883741
13	65.67227	91.9334018
13	39.00272	92.2618382
13	37.79530	93.5324554
13	35.51390	89.5991901
13	39.21945	83.5434818
13	31.58820	77.0280524
13	32.65778	80.1138613
13	31.64160	77.6108332
13	30.98714	63.9440280
13	27.43963	65.7444630
13	30.57837	65.5219455
13	28.80940	59.6210045
13	27.93952	50.9850621
13	33.84995	46.2844744
13	32.62846	54.0637205
13	32.43865	49.9030195
13	35.83829	53.3514883
13	37.14204	49.7419880
13	34.64455	54.4441078
13	35.67540	49.6256433
13	64.99459	49.4621728
13	66.12915	61.6437179
13	65.79065	55.9453737
13	67.50178	60.8502275
13	67.62951	61.4291061
13	63.91006	62.9723349
13	66.54936	67.7255887
13	64.05154	48.8200940
13	68.19329	46.5435408
13	65.27839	44.8203529
13	34.99766	28.6329939
13	33.92377	53.5586885
13	66.00445	52.6846691
13	37.02326	32.1184817
13	34.69827	36.4753541
13	34.86344	30.9392745
13	31.09007	32.3837547
13	34.92131	35.4184381
13	30.34336	32.5245632
13	35.48333	44.4916349
13	33.23491	38.5024837
13	35.43994	47.7975177
13	33.87351	37.0560285
13	28.56414	34.6263997
13	31.31955	31.6639905
13	30.79617	23.5190344
13	34.23336	22.4959116
13	36.63079	31.4768313
13	34.54862	26.1110879
13	37.51964	29.2676059
13	62.42570	34.0442063
13	64.32038	31.7856295

Chapter 3

Hello bookdown

All chapters start with a first-level heading followed by your chapter title, like the line above. There should be only one first-level heading (`#`) per .Rmd file.

3.1 A section

All chapter sections start with a second-level (`##`) or higher heading followed by your section title, like the sections above and below here. You can have as many as you want within a chapter.

An unnumbered section

Chapters and sections are numbered by default. To un-number a heading, add a `{.unnumbered}` or the shorter `{-}` at the end of the heading, like in this section.

Chapter 4

Parts

You can add parts to organize one or more book chapters together. Parts can be inserted at the top of an .Rmd file, before the first-level chapter heading in that same file.

Add a numbered part: `# (PART) Act one {-}` (followed by `# A chapter`)

Add an unnumbered part: `# (PART\*) Act one {-}` (followed by `# A chapter`)

Add an appendix as a special kind of un-numbered part: `# (APPENDIX) Other stuff {-}` (followed by `# A chapter`). Chapters in an appendix are prepended with letters instead of numbers.

Chapter 5

Footnotes and citations

5.1 Footnotes

Footnotes are put inside the square brackets after a caret `^[]`. Like this one [1].

5.2 Citations

Reference items in your bibliography file(s) using `@key`.

For example, we are using the **bookdown** package (Xie, 2022) (check out the last code chunk in index.Rmd to see how this citation key was added) in this sample book, which was built on top of R Markdown and **knitr** (Xie, 2015) (this citation was added manually in an external file book.bib). Note that the `.bib` files need to be listed in the index.Rmd with the YAML `bibliography` key.

The `bs4_book` theme makes footnotes appear inline when you click on them. In this example book, we added `csl: chicago-fullnote-bibliography.csl` to the `index.Rmd` YAML, and include the `.csl` file. To download a new style, we recommend: https://www.zotero.org/styles/

The RStudio Visual Markdown Editor can also make it easier to insert citations: https://rstudio.github.io/visual-markdown-editing/#/citations

[1] This is a footnote.

Chapter 6

Blocks

6.1 Equations

Here is an equation.

$$f\left(k\right) = \binom{n}{k} p^k \left(1-p\right)^{n-k} \tag{6.1}$$

You may refer to using `\@ref(eq:binom)`, like see Equation (6.1).

6.2 Theorems and proofs

Labeled theorems can be referenced in text using `\@ref(thm:tri)`, for example, check out this smart theorem 6.1.

Theorem 6.1. *For a right triangle, if c denotes the* length *of the hypotenuse and a and b denote the lengths of the* ***other*** *two sides, we have*

$$a^2 + b^2 = c^2$$

Read more here https://bookdown.org/yihui/bookdown/markdown-extensions-by-bookdown.html.

6.3 Callout blocks

The `bs4_book` theme also includes special callout blocks, like this `.rmdnote`.

You can use **markdown** inside a block.

```
head(beaver1, n = 5)
#>   day time  temp activ
#> 1 346  840 36.33     0
#> 2 346  850 36.34     0
#> 3 346  900 36.35     0
#> 4 346  910 36.42     0
#> 5 346  920 36.55     0
```

It is up to the user to define the appearance of these blocks for LaTeX output.

You may also use: `.rmdcaution`, `.rmdimportant`, `.rmdtip`, or `.rmdwarning` as the block name.

The R Markdown Cookbook provides more help on how to use custom blocks to design your own callouts: https://bookdown.org/yihui/rmarkdown-cookbook/custom-blocks.html

Bibliography

Xie, Y. (2015). *Dynamic Documents with R and knitr*. Chapman and Hall/CRC, Boca Raton, Florida, 2nd edition. ISBN 978-1498716963.

Xie, Y. (2022). *bookdown: Authoring Books and Technical Documents with R Markdown*. R package version 0.25.