Text Analysis Using R

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Contents

Chapter 1

Prerequisites

This is a *sample* book written in **Markdown**. You can use anything that Pandoc's Markdown supports, e.g., a math equation $a^2 + b^2 = c^2$.

For now, you have to install the development versions of **bookdown** from Github:

```
devtools::install_github("rstudio/bookdown")
```

Remember each Rmd file contains one and only one chapter, and a chapter is defined by the first-level heading #.

Chapter 2

Introduction

Ken's modification.

You can label chapter and section titles using `{#label}` after them, e.g., we can reference Chapter 2. If you do not manually label them, there will be automatic labels anyway, e.g., Chapter 4.

Figures and tables with captions will be placed in `figure` and `table` environments, respectively.

```r
par(mar = c(4, 4, .1, .1))
plot(pressure, type = 'b', pch = 19)
```

Reference a figure by its code chunk label with the `fig:` prefix, e.g., see Figure 2.1. Similarly, you can reference tables generated from `knitr::kable()`, e.g., see Table 2.1.

```r
knitr::kable(
  head(iris, 20), caption = 'Here is a nice table!',
  booktabs = TRUE
)
```

You can write citations, too. For example, we are using the **bookdown** package (Xie, 2016) in this sample book, which was built on top of R Markdown and **knitr** (Xie, 2015). ddd aaa

Figure 2.1: Here is a nice figure!

Table 2.1: Here is a nice table!

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa
4.6	3.4	1.4	0.3	setosa
5.0	3.4	1.5	0.2	setosa
4.4	2.9	1.4	0.2	setosa
4.9	3.1	1.5	0.1	setosa
5.4	3.7	1.5	0.2	setosa
4.8	3.4	1.6	0.2	setosa
4.8	3.0	1.4	0.1	setosa
4.3	3.0	1.1	0.1	setosa
5.8	4.0	1.2	0.2	setosa
5.7	4.4	1.5	0.4	setosa
5.4	3.9	1.3	0.4	setosa
5.1	3.5	1.4	0.3	setosa
5.7	3.8	1.7	0.3	setosa
5.1	3.8	1.5	0.3	setosa

Chapter 3

Literature

Here is a review of existing methods.

Chapter 4

Methods

We describe our methods in this chapter.

Chapter 5

Applications

Some *significant* applications are demonstrated in this chapter.

5.1 Example one

5.2 Example two

Chapter 6

Final Words

We have finished a nice book.

Chapter 7

Bookdown Memo (by Aki)

7.1 install bookdown

```
devtools::install_github("rstudio/bookdown")
```

7.2 working with a demo

Fork a demo-book

Clone the repo. Rroj file works only with the Preview version of RStudio.

7.2.1 Edit index.Rmd

Following two lines in index.Rmd determine the style of book

```
site: bookdown::bookdown_site
output: bookdown::gitbook
```

Options for theme of the book is avaialble here

Other information (title, author etc) will be going this file as well.

7.2.2 Compile a book

Use "Build book" in `Build` of RStudio. If you choose gitbook format, it will create a book in HTML format under _book folder. After compiling a book, a viewer for selected format will be opened.

If you are working in an existing project and do not see the option of `Build`, go to "Project Options" and change the build tool to "Website". "Build book" should take care of everything:

1. Build a html book
2. Generate a pdf-book through LaTeX
3. Generate a epub book

In order to check the output in a browser, open `index.html` in the `_book` folder. In browser preview, you can use `edit` function which redirects to a source of Rmd on github. The idea is that other conributors of the book edit source and send a pull-request.

7.2.3 Start a project from sratch

Create a new project. Generate a new index.Rmd. The header should look like:

```
---
title: "Index"
author: "Akitaka Matsuo"
date: "24 October 2016"
output: bookdown::gitbook
site: bookdown::bookdown_site
---
```

7.2.4 Adding chapters

Add a new Rmd file (need to delete headers)

7.2.5 Referencing figures and tables

`\@{fig:figname}` and `\@{tab:tablename}`. Fignames defined after the syntax highlighting methods in code-chunks, like `{r nice-fig`. Go Chater 1 to see working examples.

7.2.6 Align equation

This syntax works:

```
\begin{align}
  a &= b \\
  c &= d
\end{align}
```

The code above creates following output

$$
\begin{align}
a &= b \tag{7.1} \\
c &= d \tag{7.2}
\end{align}
$$

7.2.7 Resources

More examples (e.g. shiny apps, widget)

Video tutorials

Bibliography

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

Xie, Y. (2016). *bookdown: Authoring Books with R Markdown.* R package version 0.1.18.