

# R Markdown Cookbook

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# Contents



# Preface

This book is in a **very** early stage of development. If you have any suggestions on what should be included within this book, please get in touch via [GitHub](#)

R Markdown is a powerful tool for combining analysis and reporting into the same document. Since the development of the **rmarkdown** package (?), it has grown to become a diverse ecosystem of code, and reports, books and websites can all easily be generated directly from R code.

There is a wealth of guidance which has grown over the past few years. *R Markdown: The Definitive Guide* (?). However, as noted by Yihui, it was commented by the publisher that it would be beneficial to provide more practical examples of the use of R Markdown. And so, the idea of this book was born.

To fill the gap for official documentation, users often seek for help on StackOverflow. At the time of writing, there were almost 4,000 different questions with the **r-markdown** tag. However, the use of the website is relatively difficult if you do not have a specific problem you are trying to search for, and therefore it is hard to be able to tell what is possible with R Markdown unless you have the insight to search for a specific question. This book aims to draw together much existing literature from StackOverflow, and provide up-to-date solutions for everyday queries that users commonly face.

This book is designed to provide a range of examples of how to extend the functionality of your R Markdown documents. As a cookbook, this guide is recommended to new or intermediate R Markdown users who are looking for practical examples of how R Markdown documents can be effectively updated.

## How to read this book

The book is designed to highlight the many ways in which your R Markdown documents can be customized. Users are encouraged to try using the concepts within their own documents. The code detailed in the book should be sufficient, but the full source code and examples are provided on [GitHub](#).

It is recommended that readers have a basic understanding of R Markdown. Chapter 2 of *R Markdown: The Definitive Guide* (?) provides a great overview of the basics of R Markdown and is recommended background reading for any new users of R Markdown.

It should be noted that this guide does not intend to provide a full technical reference for R Markdown, and there is already extensive literature available on these topics. This book aims to supplement, not replace, this existing literature, and it is therefore recommended that readers explore the following books if they seek further information:

- *R Markdown: The Definitive guide* (?): provides an overview of the R Markdown package and the wide range of ways it can be used.
- *Dynamic documents and knitr*: provides more detailed technical guidance on the inner workings of **rmarkdown** and **knitr** (?).
- *Authoring books with bookdown* (?): a short book which provides details on the **bookdown** package (?), which is designed to simplify the creation of long-format documents in R Markdown.

- *blogdown: Creating Websites with R Markdown* (?): provides details of the **blogdown** package (?).

Where relevant, this book provides references to these existing resources.

## Structure of the book

The book is broken down into small “recipes” which aim to demonstrate a single concept at a time.

Chapter content to be finalised once recipes created.

## Software information and conventions

The R session information used when compiling this book is as follows:

```
xfun::session_info(c(
  'blogdown', 'bookdown', 'knitr', 'rmarkdown'), dependencies = FALSE)
```

```
## R version 3.5.0 (2018-04-23)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 17134)
##
## Locale:
##   LC_COLLATE=English_United Kingdom.1252
##   LC_CTYPE=English_United Kingdom.1252
##   LC_MONETARY=English_United Kingdom.1252
##   LC_NUMERIC=C
##   LC_TIME=English_United Kingdom.1252
##
## Package version:
##   blogdown_0.8   bookdown_0.7   knitr_1.20    rmarkdown_1.10
```

We do not add prompts (`>` and `+`) to R source code in this book, and we comment out the text output with two hashes `##` by default, as you can see from the R session information above. This is for your convenience when you want to copy and run the code (the text output will be ignored since it is commented out). Package names are in bold text (e.g., **rmarkdown**), and inline code and filenames are formatted in a typewriter font (e.g., `knitr::knit('foo.Rmd')`). Function names are followed by parentheses (e.g., `blogdown::serve_site()`). The double-colon operator `::` means accessing an object from a package.

“Rmd” is the filename extension of R Markdown files, and also an abbreviation of R Markdown in this book.

## Acknowledgements

# About the Authors





## Part I

# Get Started



# Chapter 1

## Installation

We assume you have already installed R (<https://www.r-project.org>) (?) and the RStudio IDE (<https://www.rstudio.com>). RStudio is not required but recommended, because it makes it easier for an average user to work with R Markdown. If you do not have RStudio IDE installed, you will have to install Pandoc (<http://pandoc.org>), otherwise there is no need to install Pandoc separately because RStudio has bundled it. Next you can install the **rmarkdown** package in R:

```
# Install from CRAN
install.packages('rmarkdown')

# Or if you want to test the development version,
# install from GitHub
if (!requireNamespace("devtools"))
  install.packages('devtools')
devtools::install_github('rstudio/rmarkdown')
```

