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My first paper

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⁴

Abstract

⁵

Hopefully with this minimal example you will appreciate the robustness and flexibility
⁶ of `bookdown` and you will start writing amazing reproducible documents!!

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23 **1 Introduction**

- 24 This is my introduction to the flexible `bookdown` (Xie 2016) package.
- 25 `bookdown` extends the syntax provided by R Markdown, allowing automatic numbering of
- 26 figures / tables / equations, and cross-references within a single documents.

27 **2 Results**

- 28 All the Figures created by the chunks in this article will be saved into the `img/` which is
- 29 created in the setup chunk at the beginning of this document.

```
knitr::opts_chunk$set(echo = TRUE, fig.height = 5, fig.width = 5, fig.path = "img/", tidy =
```

30 **2.1 Some LaTex options!**

- 31 • Try removing the following from the YAML!

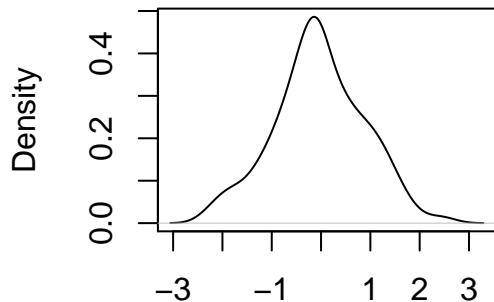
```
---  
\usepackage{setspace}\doublespacing  
\usepackage{lineno}  
\linenumbers  
---
```

- 32 • Try adding the LaTex command `\usepackage{endfloat}` after `header-includes:` in
- 33 the YAML

³⁴ **2.2 Generate figures within a chunk**

```
plot(density(rnorm(100)))
```

```
density.default(x = rnorm(100
```



$N = 100$ Bandwidth = 0.2854

Figure 1: Red trees in autumn

³⁵ It's a pretty cool bell curve in Figure 1.

- ³⁶ • Don't use `_` in labels! This is taken from `bookdown` book: *If you want to cross-reference figures or tables generated from a code chunk, please make sure the chunk label only contains alphanumeric characters (a-z, A-Z, 0-9), slashes (/), or dashes (-).*
- ³⁷
- ³⁸

³⁹ **2.3 Insert png figures**

```
img <- png::readPNG("img/kooka.png")
grid.raster(img)
```



Figure 2: Loud Kookabara

40 **2.4 Insert pdf figures with knitr::include_graphics**

```
knitr::include_graphics("img/reproducible-documents.pdf")
```

R Markdown library(bookdown)

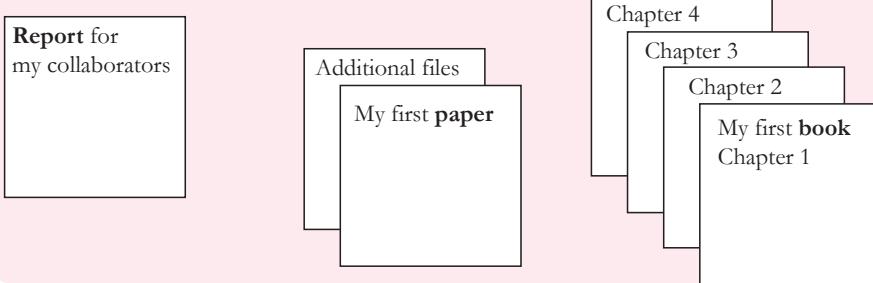


Figure 3: All types of documents with `bookdown`

⁴¹ 2.5 Insert tables with `knitr::kable`

```
tab <- knitr::kable(head(diamonds), caption = "A table of the first 10 rows and three columns of the diamonds data.", booktabs = TRUE)

kableExtra::kable_styling(tab, latex_options = "hold_position")
```

Table 1: A table of the first 10 rows and three columns of the diamonds data.

carat	cut	color	clarity	depth	table	price	x	y	z
0.23	Ideal	E	SI2	61.5	55	326	3.95	3.98	2.43
0.21	Premium	E	SI1	59.8	61	326	3.89	3.84	2.31
0.23	Good	E	VS1	56.9	65	327	4.05	4.07	2.31
0.29	Premium	I	VS2	62.4	58	334	4.20	4.23	2.63
0.31	Good	J	SI2	63.3	58	335	4.34	4.35	2.75
0.24	Very Good	J	VVS2	62.8	57	336	3.94	3.96	2.48

⁴² We created the simple Table 1. See more on tables and long tables <https://bookdown.org/>

⁴³ [yihui/bookdown/tables.html](https://yihui.github.io/bookdown/tables.html).

44 2.6 Extra tips: Setup your bibliography with `utils::citation`

```
45 print(utils::citation("rticles"), bibtex = TRUE)
46 ## To cite package 'rticles' in publications use:
47 ##
48 ## JJ Allaire, Yihui Xie, R Foundation, Hadley Wickham, Journal of
49 ## Statistical Software, Ramnath Vaidyanathan, Association for
50 ## Computing Machinery, Carl Boettiger, Elsevier, Karl Broman,
51 ## Kirill Müller, Bastiaan Quast, Randall Pruim, Ben Marwick,
52 ## Charlotte Wickham, Oliver Keyes, Miao Yu, Daniel Emaasit,
53 ## Thierry Onkelinx, Alessandro Gasparini, Marc-Andre Desautels,
54 ## Dominik Leutnant, MDPI, Oğuzhan Öğreden, Dalton Hance and Daniel
55 ## Nüst (2018). rticles: Article Formats for R Markdown. R package
56 ## version 0.6. https://CRAN.R-project.org/package=rticles
57 ##
58 ## A BibTeX entry for LaTeX users is
59 ##
60 ## @Manual{,
61 ##   title = {rticles: Article Formats for R Markdown},
62 ##   author = {JJ Allaire and Yihui Xie and {R Foundation} and Hadley Wickham and {Journal of
63 ##             Computing Machinery} and Carl Boettiger and Elsevier and Karl Broman and
64 ##             Kirill Müller and Bastiaan Quast and Randall Pruim and Ben Marwick and
65 ##             Charlotte Wickham and Oliver Keyes and Miao Yu and Daniel Emaasit and
66 ##             Thierry Onkelinx and Alessandro Gasparini and Marc-Andre Desautels and
67 ##             Dominik Leutnant and MDPI and Oğuzhan Öğreden and Dalton Hance and Daniel
68 ##             Nüst (2018)},
69 ##   note = {R package version 0.6},
70 ##   url = {https://CRAN.R-project.org/package=rticles},
```

67 **2.7 Reference/Re-number files in supplementary material**

68 Have a look at the beautiful autumn trees in Figure S1.

69 **2.8 Collaboration with co-authors**

- 70 • Setup a GitHub account and push/pull changes with your collaborators
- 71 • Checkout Overleaf for real-time collaboration on LaTex file. Have a read at this blog post
- 72 that discuss working with Git, RStudio and Overleaf at the same time. The drawback
- 73 is that, while it is easy to go from `Rmd` to `.tex` with the YAML option `keep_tex: true`,
- 74 it is not the same on the other way around. However, it is worth checking it out since
- 75 it offers plenty of journal LaTex templates!

76 **3 Conclusions**

77 Hopefully now you have a pretty good overview of the options offered by `bookdown!` Also,

78 the best way to learn is to go through other people's GitHub accounts and have a look at

79 how they do things as well as ask questions!

80 **Supplementary Material**

81 **A beautiful autumn tree**

```
img <- png::readPNG("img/trees.png")
grid::grid.raster(img)
```

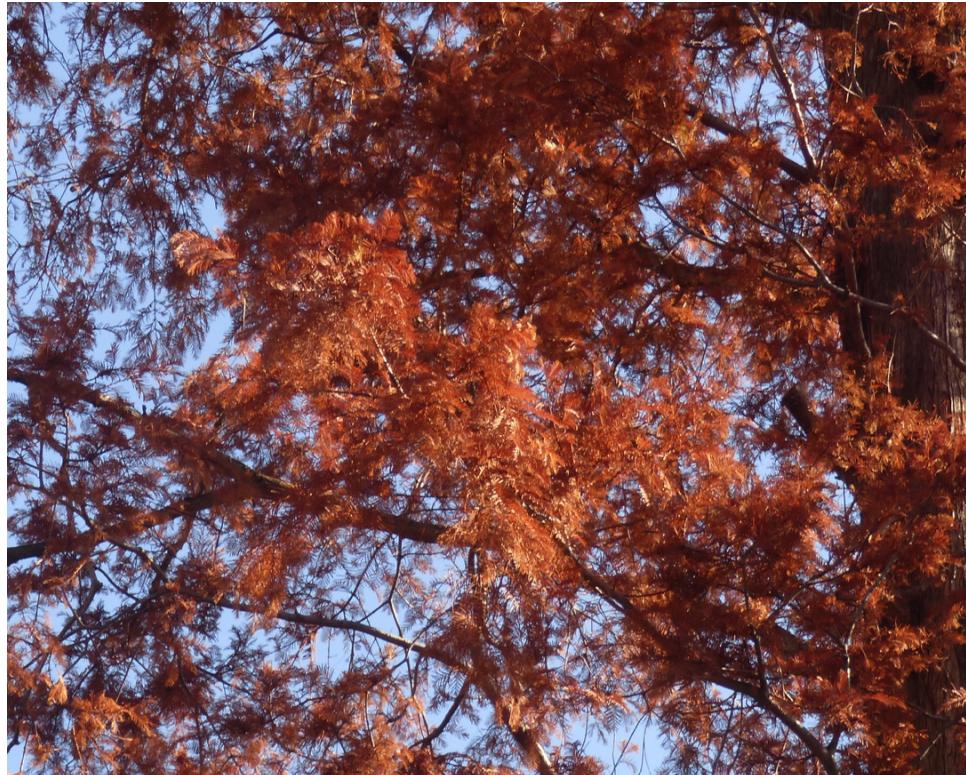


Figure S1: Autumn trees at the University of Melbourne

⁸² **References**

⁸³ **3.1 Interesting blogposts**

- ⁸⁴ • *Interface R with Overleaf* <https://medium.com/@arinbasu/a-tutorial-on-how-to-interface-an-r-notebook-103a2a2a2a>
- ⁸⁵ • Minimal `bookdown` template for scientific papers <http://landscapeportal.org/blog/2017/09/06/r-markdown-template-for-a-scientific-manuscript/>
- ⁸⁶ • Earo Wang papers on GitHub and helpful suggestions via email!

⁸⁸ Xie, Yihui. 2016. *Bookdown: Authoring Books and Technical Documents with R Markdown*.

⁸⁹ Boca Raton, Florida: Chapman; Hall/CRC. <https://github.com/rstudio/bookdown>.