Title

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HS-Fresenius: Data Science for Business

Contents

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Word count: 691

Abstract

Bli bla blub Kirchkamp (2018)

1 h1 Heading

1.1 h2 Heading

1.1.1 h3 Heading

1.1.2 h31 Heading

1.1.2.1 h4 Heading

1.1.2.1.1 h5 Heading h6 Heading

2 Always set your working directory.

```
setwd("/home/sthu/Dropbox/hsf/github/courses/rmd/")
```

Xie, Allaire, and Grolemund (2018) and Xie, Dervieux, and Riederer (2020) are good books for Rmarkdown.

3 Stuff

3.1 Horizontal Rules

3.2 Emphasis

This is bold text

This is bold text

This is italic text

This is italic text

~~Strikethrough~~

3.3 Lists

Unordered

- Create a list by starting a line with `+`, `-`, or `*`
- Sub-lists are made by indenting 2 spaces:
  - Marker character change forces new list start:

        * Ac tristique libero volutpat at
        * Facilisis in pretium nisl aliquet
        * Nulla volutpat aliquam velit
- Very easy!

Ordered

1. Lorem ipsum dolor sit amet
2. Consectetur adipiscing elit
3. Integer molestie lorem at massa
4. You can use sequential numbers...
5. ...or keep all the numbers as `1.`

Start numbering with offset:

57. foo
58. bar

3.4 Code

Inline `code`

Indented code

```
// Some comments
line 1 of code
line 2 of code
line 3 of code
```

Block code "fences"

```
Sample text here...
```

Syntax highlighting

```
var foo = function (bar) {
  return bar++;
};

console.log(foo(5));
```

3.5 R Code Chunks

Please consider the introduction here.

```
norm <- rnorm(100, mean = 0, sd = 1)
```

```
##   A  B
```

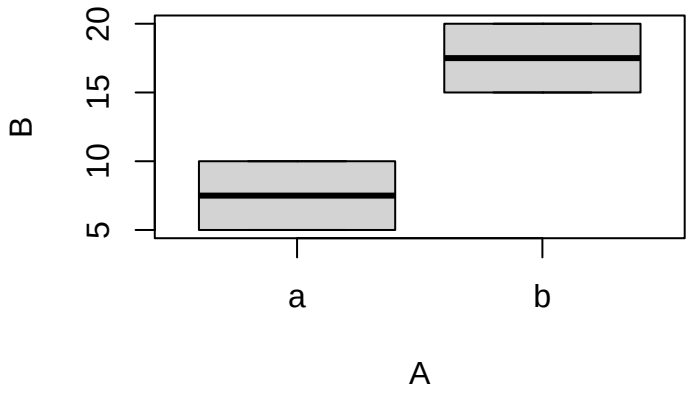
```
## 1 a  5
## 2 a 10
## 3 b 15
## 4 b 20
```

```
library(dplyr)
```

```
A <- c("a", "a", "b", "b")
B <- c(5, 10, 15, 20)
dataframe <- data.frame(A, B)
print(dataframe)
```

```
##   A  B
## 1 a  5
## 2 a 10
## 3 b 15
## 4 b 20
```

```
boxplot(B~A,data=dataframe)
```




```
library("tidyverse")
```

To show the data in an interactive environment you can use the following code:

```
library("rmarkdown")
paged_table(mtcars)
```

3.6 Tables

Option	Description
data	path to data files to supply the data that will be passed into templates.
engine	engine to be used for processing templates. Handlebars is the default.
ext	extension to be used for dest files.

Right aligned columns

Option	Description
data	path to data files to supply the data that will be passed into templates.
engine	engine to be used for processing templates. Handlebars is the default.
ext	extension to be used for dest files.

Plant	Temp.	Growth
A	20	0.65
B	20	0.95
C	20	0.15

3.7 Links

link text

link with title

Autoconverted link https://github.com/nodeca/pica (enable linkify to see)

3.8 Images

3.9 Formulas

When $a \neq 0$, there are two solutions to $(ax^2 + bx + c = 0)$ and they are

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

3.10 Footnotes

Footnote 1 link[1].

Footnote 2 link[2].

Inline footnote[3] definition.

Duplicated footnote reference[4].

[1] Footnote **can have markup**
and multiple paragraphs.

[2] Footnote text.

[3] Text of inline footnote

[4] Footnote text.

Figure 1: Minion

Figure 2: Minion

3.11 Citing Papers

You can cite papers like that: The book *R for Data Science* by Wickham and Grolemund (2018) is a good one. I am the author of Huber and Rust (2016).

In order to be able to do that you need to save the references in the reference.bib file that I mentioned in the header. I highly recommend using a bibliography manager such as www.jabref.org that allows to save and manage allbibliography entries.

3.12 Render everything

If you separately run this code, it will render the file and produce all the different formats that are mentioned in the preamble. Here the following file formats will be generated: pdf, html, and word.

Literature

Huber, Stephan, and Christoph Rust. 2016. "Calculate Travel Time and Distance with OpenStreetMap Data Using the Open Source Routing Machine (OSRM)." *The Stata Journal* 16 (2): 416–23.

Kirchkamp, Oliver. 2018. "Using Graphs and Visualising Data." Retrieved on 30 January 2023. https://www.kirchkamp.de/oekonometrie/pdf/gra-p.pdf.

Wickham, Hadley, and Garrett Grolemund. 2018. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. Sebastopol, CA: O'Reilly.

Xie, Yihui, Joseph J Allaire, and Garrett Grolemund. 2018. *R Markdown: The Definitive Guide*. Retrieved on 30 January 2023; Chapman; Hall/CRC. https://bookdown.org/yihui/rmarkdown/.

Xie, Yihui, Christophe Dervieux, and Emily Riederer. 2020. *R Markdown Cookbook*. Retrieved on 30 January 2023; Chapman; Hall/CRC. https://bookdown.org/yihui/rmarkdown-cookbook.