

Rmarkdown course - practical

Overview and tasks

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1 Intro

This document lists the available example-documents, provides tasks and serves as an example-rmarkdown-document in itself.

A good way to learn rmarkdown is to take a look at the pdf-version and try to recreate it.

2 Overview material

- The slides (RmarkdownSlides.pdf) contain an overview, example-code and -output and **a lot of links to additional material**. If you can't find what you need in the slides or the provided links, check stackoverflow
- An example of a latex header-file is header.tex (used for this document as well)
- Formatting word output:
 - run *WordExample.rmd*
 - add *reference_docx: WordTemplate.docx* to the YAML-header
 - run *WordExample.rmd* again
- Repeated section:
 - open, inspect and run *Ex1_RepeatedSection_P.rmd*
 - *Ex1_RepeatedSection_C.rmd* is the 'child'-rmd that is repeated in the for loop
 - *Ex1B_RepeatedSection_P.rmd* and *Ex1B_RepeatedSection_C.rmd* provide a slightly different example
- Repeated report:
 - open, inspect and run *Ex2_AutomatedReport_M.R*
 - *Ex2_AutomatedReport_R.Rmd* is the rmarkdown file that produces each separate report

3 Some examples

This sections presents some examples.

3.1 A landscape page

Table 1: *A part of the cars data*

| | mpg | cyl | disp |
|--------------------------|------|-----|------|
| Mazda RX4 | 21 | 6 | 160 |
| Mazda RX4 Wag | 21 | 6 | 160 |
| Datsun 710 | 22.8 | 4 | 108 |
| Hornet 4 Drive | 21.4 | 6 | 258 |
| Hornet Sportabout | 18.7 | 8 | 360 |
| Valiant | 18.1 | 6 | 225 |

3.2 A table, a graph and some inline-R-code

The table on the landscape page presented only 6 of the 50 rows and only 3 of the 2 columns. Here is a fancy kableExtra version of the same table

| mpg | cyl | disp |
|------|-----|------|
| 22.8 | 4 | 108 |
| 21 | 6 | 160 |
| 21 | 6 | 160 |
| 21.4 | 6 | 258 |
| 18.1 | 6 | 225 |
| 18.7 | 8 | 360 |

On the same page a graph:

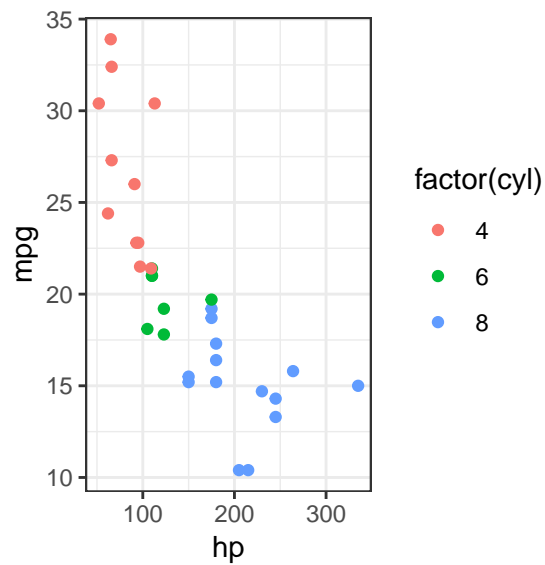


Figure 1: a nice mtcars-graph

3.3 A citation

Here is a citation from the example bibliography: (Ahn et al. 2015)

4 Tasks

(notice this starts on a new page)

1. Open the Rmd-examples
 - check if you understand the code
 - run the markdown, check if it runs without errors
2. Start from scratch:
 - Open a new rmarkdown
 - Adapt the yaml-header such that
 - there is a table of contents up to only 1 level (so excluding 3.1 or 3.1.a)
 - sections are numbered
 - Make a document with three sections:
 - Section 1:
 - * a ggplot-graph with the mtcars-dataset, you can choose
 - * exactly the same graph, but much bigger and right aligned
 - * an external png
 - * create a new subsection for each of the graphs
 - Section 2:
 - * starts on a new page
 - * Two subsections. In each of these subsections, recreate (starting from mtcars) one of the two tables on p. 14 of the kableExtra vignette
 - Section 3:
 - * Automate the production of a separate subsection for the set of cars with the same number of cylinders (variable cyl)
 - * Each subsection contains a graph of hp vs mpg
 - Check with the solution. Play around with every parameter/piece of code you can find and check the result

Example-Bibliography

Ahn, Jung-Min, Jae-Hyung Roh, Young-Hak Kim, Duk-Woo Park, Sung-Cheol Yun, Pil Hyung Lee, Mineok Chang, et al. 2015. “Randomized Trial of Stents Versus Bypass Surgery for Left Main Coronary Artery Disease: 5-Year Outcomes of the PRECOMBAT Study.” *Journal of the American College of Cardiology* 65 (20): 2198–2206. <https://doi.org/10.1016/j.jacc.2015.03.033>.