Rmarkdown course - practical

Overview and tasks

Table of contents

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.

Overview material

- The slides 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:

    – render *Ex_Word.qmd* with and without *reference_docx: WordTemplate.docx* in the YAML-header

- Repeated section:

    – open, inspect and run *Ex_RepeatedSection1.qmd*
    – *Child_RepeatedSection1.qmd* is the 'child'-rmd that is repeated in the for loop
    – *Ex_RepeatedSection2.qmd* and *Child_RepeatedSection2.qmd* provide a slightly different example

- Repeated report:

    – open, inspect an run *Ex_AutomatedReport_Main.R*
    – *Ex_AutomatedReport_Report.qmd* is the rmarkdown file that produces each seperate report

Some examples

This sections presents some examples.

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

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

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
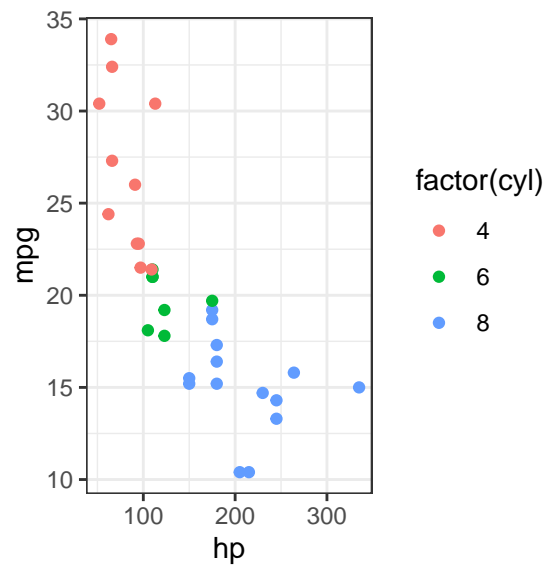
On the same page a graph:

Figure 1: *a nice mtcars-graph*

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.