R Markdown Demo Instructions

Jared Sampson

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Create a new document in RStudio

1. File > New File > R Markdown. . .
2. Select 'Document', add Title and select output format.

Getting started

1. Save the document to a new folder for this demo project.
2. Press 'Knit'. You should see the formatted document appear in a new RStudio window.
3. Look at how the source code defines **bold** text and "fenced" (```) code blocks.
4. Delete everything after the first (`setup`) code block (or don't, if you want to keep it for reference).

Let's do a problem from Problem Set 2

1. Copy the `bodytempandheartrate.csv` and `d9k_all.s2.csv` datasets to the folder. Make them read-only if you like (this is a good idea).
2. Problem #1a: Calculate 95% confidence intervals for body temperature and heart rate for the sample as a whole and for men and women separately.
   - The brute force way, e.g. `t.test(bthr$T[bthr$MF == 1], conf.int=TRUE, conf.level=0.95)$conf.int`. Press 'Knit' (you can do this as often as you like).
   - With variables for the data subsets: `temp_m <- bthr$T[bthr$MF == 1]`, and `t.test(temp_m, conf.int=TRUE)$conf.int`
   - Write a function to calculate confidence intervals:
   - Then do it the easy way: `t_conf_int(temp_m, 0.95)`

Make a figure

1. Add some histograms or boxplot of the data: `hist(temp); hist(temp_m); hist(temp_f)`
2. That takes up too much space. Combine them into one row: `par(mfrow=c(1, 3))`
3. But now the aspect ratio is too tall. Correct it; `{r hist, fig.asp=0.4}`