002-Minimum Working Example

May 13, 2019

Abstract

We familiarize ourselves with the basics of `knitr` (Xie, 2015, 2013, 2014); including plots, tables and code.

1   Figures

The first example is given by 1.1

R Example 1.1.

```
par(mar = c(4, 4, 0.1, 0.1))
x = rnorm(100)
hist(x, main = "", col = "lightblue", border = "white")
rug(x)
```

R Example 1.2.

```
plot(cars, pch = 20, col = "darkgray")
fit <- lm(dist ~ speed, data = cars)
abline(fit, lwd = 2)
```

R Example 1.3.

```
par(mfrow = c(2, 2))
plot(fit)
```
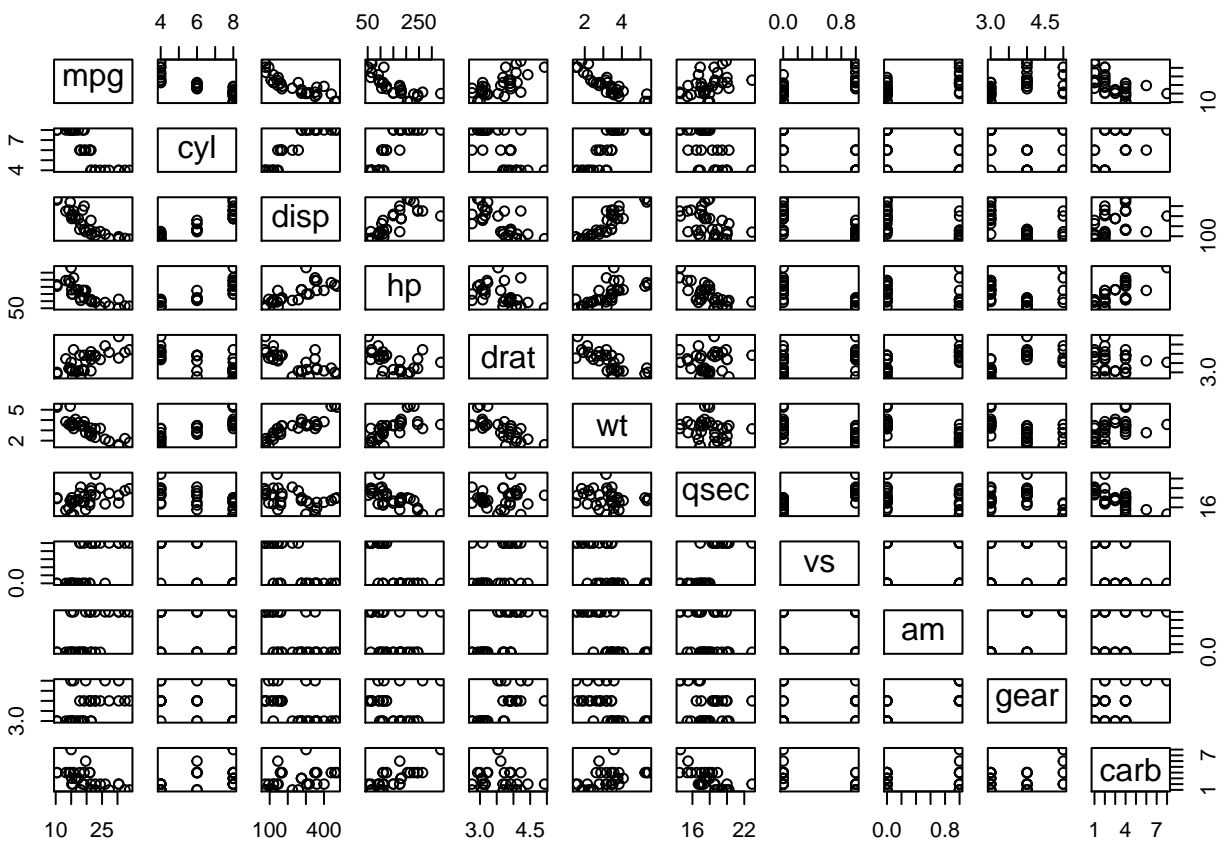
2   Tables

R Example 2.1.

```
fit <- lm(dist ~ speed, data = cars)
summary(fit)
xtable::xtable(fit, digits = 2)
```

R Example 2.2.

```
# %>% is the pipe operator from the magrittr library
cars %>% summary() %>% xtable
```

```
plot(mtcars)
```

References

Stefan Milton Bache and Hadley Wickham. *magrittr: A Forward-Pipe Operator for R*, 2014. URL http://CRAN.R-project.org/package=magrittr. R package version 1.5.

David B. Dahl. *xtable: Export tables to LaTeX or HTML*, 2014. URL http://CRAN.R-project.org/package=xtable. R package version 1.7-4.

Yihui Xie. *Dynamic Documents with R and knitr*. Chapman and Hall/CRC, Boca Raton, Florida, 2013. URL http://yihui.name/knitr/. ISBN 978-1482203530. 1

Yihui Xie. knitr: A comprehensive tool for reproducible research in R. In Victoria Stodden, Friedrich Leisch, and Roger D. Peng, editors, *Implementing Reproducible Computational Research*. Chapman and Hall/CRC, 2014. URL http://www.crcpress.com/product/isbn/9781466561595. ISBN 978-1466561595. 1

Yihui Xie. *knitr: A General-Purpose Package for Dynamic Report Generation in R*, 2015. URL http://yihui.name/knitr/. R package version 1.10.5. 1

A   R Code

```r
par(mar = c(4, 4, 0.1, 0.1))
x = rnorm(100)
hist(x, main = "", col = "lightblue", border = "white")
rug(x)
plot(cars, pch = 20, col = "darkgray")
fit <- lm(dist ~ speed, data = cars)
abline(fit, lwd = 2)
par(mfrow = c(2, 2))
plot(fit)
fit <- lm(dist ~ speed, data = cars)
summary(fit)
xtable::xtable(fit, digits = 2)
# %>% is the pipe operator from the magrittr library
cars %>% summary() %>% xtable
plot(mtcars)
print(sessionInfo(), locale = FALSE)
############################################################ R Source code file for required packages
############################################################ 002-minimum-working-example.Rmd/Rnw Host
############################################################ 'sahirbhatnagar/raqc' Author: Sahir Bha
############################################################ 31, 2018 Updated: Notes: we use pacman
############################################################ p_load will check if the package is ins
############################################################ load it
if (!require("pacman")) install.packages("pacman")

pacman::p_load(knitr, here, xtable, dplyr, data.table)
head(mtcars)
```

B   Session Information

```
print(sessionInfo(), locale = FALSE)

## R version 3.6.0 (2019-04-26)
## Platform: x86_64-pc-linux-gnu (64-bit)
## Running under: Pop!_OS 18.10
##
## Matrix products: default
## BLAS:   /usr/lib/x86_64-linux-gnu/blas/libblas.so.3.8.0
## LAPACK: /usr/lib/x86_64-linux-gnu/lapack/liblapack.so.3.8.0
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets
## [6] methods   base
##
## other attached packages:
## [1] data.table_1.12.0 dplyr_0.8.0.1     xtable_1.8-4
## [4] here_0.1          pacman_0.5.0      knitr_1.22
##
## loaded via a namespace (and not attached):
##  [1] Rcpp_1.0.1       crayon_1.3.4     rprojroot_1.3-2
##  [4] assertthat_0.2.1 R6_2.4.0         backports_1.1.3
##  [7] formatR_1.6      magrittr_1.5     evaluate_0.13
## [10] highr_0.8        pillar_1.3.1     rlang_0.3.4
## [13] stringi_1.4.3    tools_3.6.0      stringr_1.4.0
## [16] glue_1.3.1       purrr_0.3.2      xfun_0.6
## [19] compiler_3.6.0   pkgconfig_2.0.2  tidyselect_0.2.5
## [22] tibble_2.1.1
```