

iris_data_set_vm6

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Introduction

See the Introduction pdf for the various examples and the relation of this example to the others.

This example shows how to print two tables side by side. It makes use of the function `print_table_sbs` that generates the \LaTeX commands that are necessary for this. If this is usable depends on the size of the tables and your eyesight.

Utility functions and constants

```
numlist = 10 # number of observations in iris data set that is listed

print_table_sbs <- function (files,label,cap,caps,scalebox=0.85) {
  # print xtables saved in files side-by-side
  # derived from Marcin Kosiński
  # http://stackoverflow.com/questions/23926671/side-by-side-xtables-in-rmarkdown
  cat('\begin{table}[ht]\n')
  cat('\centering\n')
  for (i in 1:length(files)) {
    tc = caps[[i]]
    tci = paste0(label,letters[i])
    f = files[[i]]
    c = '\subfloat[%s]{\label{table:%s}\scalebox{%.3f}{\input{./%s}}}\quad\n'
    cat(sprintf(c,tc,tci,scalebox,f))
  }
  cat(sprintf('\caption{%s}\n',cap))
  cat(sprintf('\label{table:%s}\n',label))
  cat('\end{table}')
}
```

Explanation

We will create two tables in R and use package **xtable** to write the \LaTeX representation to a tex-file. We use the iris data set as an example and will sort it in ascending and descending order (by the variable *Sepal.Length*). Because that is twice (nearly) the same code we have created the function `create_xtable` to do this. In the function we select only the first/last 10 observations. However the only important line is `print(xtable(. . . floating=FALSE))`.

The function `print_table_sbs` will take the two files and print them side by side if that fits. Otherwise the second table will be positioned below the first one. Table 1a on page 2 we will show the 10 observations with the smallest and Table 1b the ones with the greatest *Sepal.Length*.

```
library(xtable)
create_xtable<- function (decreasing,numlist,filename) {
  data(iris)
  tab = iris[order(iris$Sepal.Length,decreasing = decreasing),]
  print(xtable(tab[1:numlist,],row.names=F),
        file=paste0(filename,'.tex'),floating=FALSE)
}

create_xtable(F,numlist,filename='asc')
create_xtable(T,numlist,filename='desc')
```

```
files = c('asc','desc') # filenames (without suffix tex)
label = 'r1' # label (sublabels have suffix 1,2, ...)
cap = 'first/last observations of iris data set sorted by \\mytextit{Sepal.Length}'
caps = c('first', 'last')
print_table_sbs(files,label,cap,caps,scalebox=0.5)
```

	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species		Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
14	4.30	3.00	1.10	0.10	setosa	132	7.90	3.80	6.40	2.00	virginica
9	4.40	2.90	1.40	0.20	setosa	118	7.70	3.80	6.70	2.20	virginica
39	4.40	3.00	1.30	0.20	setosa	119	7.70	2.60	6.90	2.30	virginica
43	4.40	3.20	1.30	0.20	setosa	123	7.70	2.80	6.70	2.00	virginica
42	4.50	2.30	1.30	0.30	setosa	136	7.70	3.00	6.10	2.30	virginica
4	4.60	3.10	1.50	0.20	setosa	106	7.60	3.00	6.60	2.10	virginica
7	4.60	3.40	1.40	0.30	setosa	131	7.40	2.80	6.10	1.90	virginica
23	4.60	3.60	1.00	0.20	setosa	108	7.30	2.90	6.30	1.80	virginica
48	4.60	3.20	1.40	0.20	setosa	110	7.20	3.60	6.10	2.50	virginica
3	4.70	3.20	1.30	0.20	setosa	126	7.20	3.20	6.00	1.80	virginica

(a) first

(b) last

(a) first

(b) last

Table 1: first/last observations of iris data set sorted by *Sepal.Length*

```
cat(paste(' #produced',ref_tab('r1',prefix='')))
```

#produced Table 1 on page 2

Session Info

```
sessionInfo()
```

```
## R version 3.2.0 (2015-04-16)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 8 x64 (build 9200)
##
## locale:
## [1] LC_COLLATE=English_United States.1252 LC_CTYPE=English_United States.1252
## [3] LC_MONETARY=English_United States.1252 LC_NUMERIC=C
## [5] LC_TIME=English_United States.1252
##
## attached base packages:
## [1] stats      graphics  grDevices  utils      datasets  methods   base
##
## other attached packages:
## [1] xtable_1.8-0 knitr_1.12.3
##
## loaded via a namespace (and not attached):
## [1] magrittr_1.5      formatR_1.2.1    tools_3.2.0      htmltools_0.2.6  yaml_2.1.13
## [6] stringi_1.0-1    rmarkdown_0.9.2 stringr_1.0.0     digest_0.6.8     evaluate_0.8
```