R package `rrtable`

Keon-Woong Moon

2018-04-08 20:39:21

If you are a data scientist or researcher, you will certainly be interested in reproducible research. R package `rrtable` makes it possible to make reports with HTML, LaTex, MS word or MS Powerpoint formats from a table of R codes.

Package Installation

You can install R package `rrtable` with the following command.

```
if(!require(devtools)){ install.packages("devtools") }
devtools::install_github("cardiomoon/rrtable")
```

Package Loading

You can load the `rrtable` package with the following R command.

```
require(rrtable)
```

Sample Data

Sample data sampleData3 is included in rrtable package. You can see the sampleData3 by folllowing R command.

```
str(sampleData3)
```

```
'data.frame':   22 obs. of  5 variables:
 $ type  : chr  "title" "subtitle" "author" "" ...
 $ title : chr  "" "" "" "" ...
 $ text  : chr  "R package `rrtable`" "Reproducible Research with a Table of R codes" "Keon-Woong Moon"
 $ code  : chr  "" "" "" "" ...
 $ option: chr  "" "" "" "" ...
```

Or you can make a table of this data

type	title	text	code	option	rowno
			df2flextable2(sampleData3)		1
					1

type	title	text	code	option	rowno
title		R package ‘rrtable‘			1
subtitle		Reproducible Research with a Table of			2
		R codes			2
author		Keon-Woong Moon			3
		If you are a data scientist or resear			4
		cher, you will certainly be intereste			4
		d in reproducible research.			4

		R package ‘rrtable‘ makes it possible to make reports with HTML, LaTex, MS word or MS Powerpoint formats from a table of R codes.			4 4 4 4 4 4
header2	Package Installation	You can install R package ‘rrtable‘ with the following command.	if(!require(devtools)){ install.packages("devtools") } devtools::install_github("cardiomoon/rrtable"))	echo=TRUE, eval=FALSE	5 5 5 5 6 6 6 6
header2	Package Loading	You can load the ‘rrtable‘ package with the following R command.	require(rrtable)	echo=TRUE	7 7 7
header2	Sample Data	Sample data sampleData3 is included in rrtable package. You can see the sampleData3 by folllowing R command. Or you can make a table of this data	str(sampleData3) df2flextable2(sampleData3[9,]) df2flextable2(sampleData3)	echo=TRUE	8 8 8 8 8 9 9 10 10
header3	mytable object	You can add mytable object with the following R code.	df2flextable2(sampleData3[11,]) mytable(Dx~.,data=acs)	echo=FALSE	11 11 11 12 12
header3	Plot	You can insert a plot into your document.	df2flextable2(sampleData3[13,]) plot(iris)	echo=FALSE	13 13 13 14
header3	ggplot	You can insert a ggplot into a document	df2flextable2(sampleData3[15,]) ggplot(iris,aes(x=Sepal.Length,y=Sepal.Width,color=Species))+geom_point()	echo=FALSE	15 15 15 16 16 16 16 16
header3	R code	You can insert the result of R code. For example, you can insert the result of regression analysis.	df2flextable2(sampleData3[17,]) fit=lm(mpg~wt*hp,data=mtcars) summary(fit)	echo=FALSE	17 17 17 17 17 18 18 19
header3	Two ggplots	You can insert two parallel ggplots with the following code.	df2flextable2(sampleData3[19,]))	echo=FALSE	20 20 20

2ggplots			ggplot(iris,aes (Sepal.Length,S epal.Width))+ge om_point() ggplot(iris,aes (Sepal.Length,S epal.Width,colo ur=Species))+ge om_point()+guid es(colour=FALSE)		21 21 21 21 22 22 22 22 22 22
header3	Two plots	You can insert two parallel plots wit h the following code.	df2flextable2(s ampleData3[21,])	echo=FALSE	23 23 23
2plots			hist(rnorm(1000)) plot(1:10)		24 24 25
header2	HTML Repor t	You can get report with HTML format(t his file) by following R command.	data2HTML(sampl eData3)	echo=TRUE, eval=FALSE	26 26 26

mytable object

You can add mytable object with the following R code.

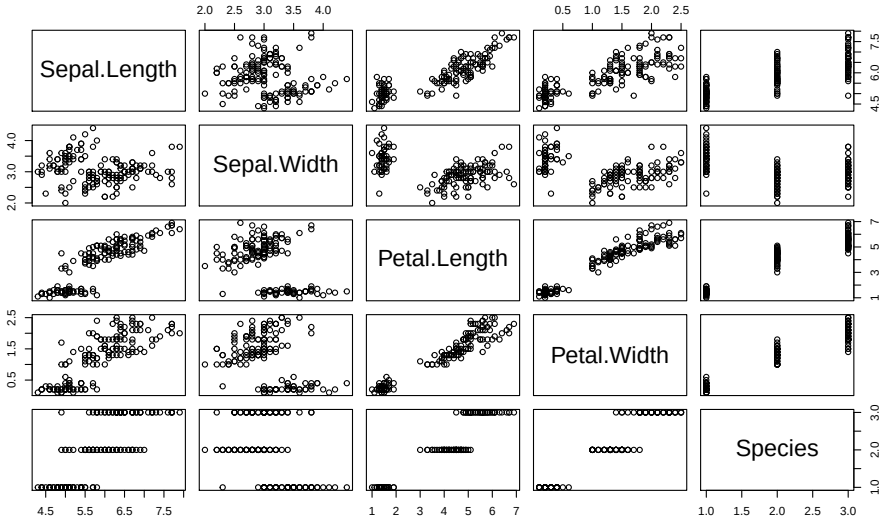
type	title	text	code	option	rowno
mytable			mytable(Dx~.,data=acs)		1

Plot

You can insert a plot into your document.

type	title	text	code	option	rowno
plot			plot(iris)		1

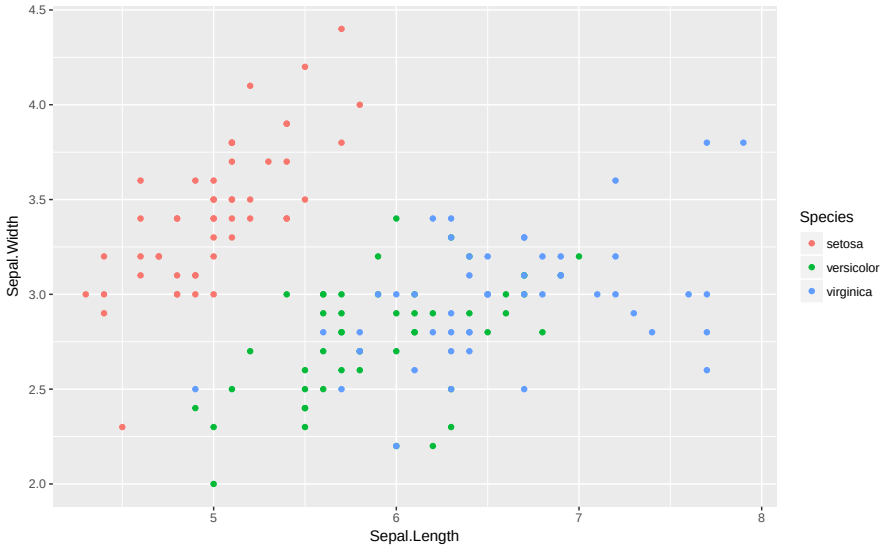
	NSTEMI (N=153)	STEMI (N=304)	Unstable Angina (N=400)	p
age	64.3 ± 12.3	62.1 ± 12.1	63.8 ± 11.0	0.073
sex				0.012
Female	50 (32.7%)	84 (27.6%)	153 (38.2%)	
Male	103 (67.3%)	220 (72.4%)	247 (61.8%)	
cardiogenicShock				0.000
No	149 (97.4%)	256 (84.2%)	400 (100.0%)	
Yes	4 (2.6%)	48 (15.8%)	0 (0.0%)	
entry				0.001
Femoral	58 (37.9%)	133 (43.8%)	121 (30.2%)	
Radial	95 (62.1%)	171 (56.2%)	279 (69.8%)	
EF	55.0 ± 9.3	52.4 ± 9.5	59.2 ± 8.7	0.000
height	163.3 ± 8.2	165.1 ± 8.2	161.7 ± 9.7	0.000
weight	64.3 ± 10.2	65.7 ± 11.6	64.5 ± 11.6	0.361
BMI	24.1 ± 3.2	24.0 ± 3.3	24.6 ± 3.4	0.064
obesity				0.186
No	106 (69.3%)	209 (68.8%)	252 (63.0%)	
Yes	47 (30.7%)	95 (31.2%)	148 (37.0%)	
TC	193.7 ± 53.6	183.2 ± 43.4	183.5 ± 48.3	0.057
LDLC	126.1 ± 44.7	116.7 ± 39.5	112.9 ± 40.4	0.004
HDLC	38.9 ± 11.9	38.5 ± 11.0	37.8 ± 10.9	0.501
TG	130.1 ± 88.5	106.5 ± 72.0	137.4 ± 101.6	0.000
DM				0.209
No	96 (62.7%)	208 (68.4%)	249 (62.2%)	
Yes	57 (37.3%)	96 (31.6%)	151 (37.8%)	
HBP				0.002
No	62 (40.5%)	150 (49.3%)	144 (36.0%)	
Yes	91 (59.5%)	154 (50.7%)	256 (64.0%)	
smoking				0.000
Ex-smoker	42 (27.5%)	66 (21.7%)	96 (24.0%)	
Never	50 (32.7%)	97 (31.9%)	185 (46.2%)	
Smoker	61 (39.9%)	141 (46.4%)	119 (29.8%)	



ggplot

You can insert a ggplot into a document

type	title	text	code	option	rowno
ggplot			ggplot(iris,aes(x=Sepal.Length,y=Sepal.Width,color=Species))+geom_point()		1



R code

You can insert the result of R code. For example, you can insert the result of regression analysis.

type	title	text	code	option	rowno
Rcode			fit=lm(mpg~wt*hp,data=mtcars)		1
			summary(fit)		2

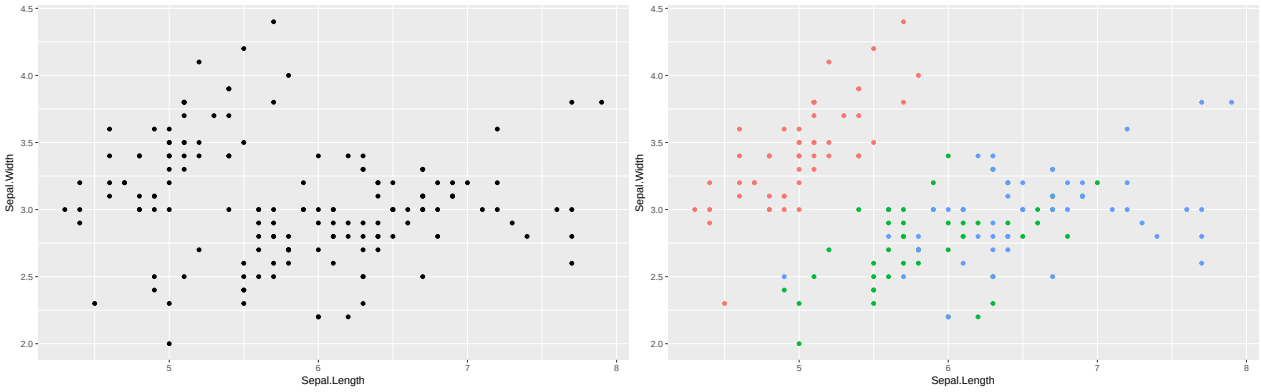
```
fit=lm(mpg~wt*hp,data=mtcars);summary(fit)
```

```
Call:
lm(formula = mpg ~ wt * hp, data = mtcars)

Residuals:
    Min      1Q  Median      3Q     Max
-3.0632 -1.6491 -0.7362  1.4211  4.5513

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) 49.80842    3.60516  13.816 5.01e-14 ***
wt          -8.21662    1.26971  -6.471 5.20e-07 ***
hp          -0.12010    0.02470  -4.863 4.04e-05 ***
wt:hp        0.02785    0.00742   3.753 0.000811 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.153 on 28 degrees of freedom
Multiple R-squared:  0.8848,    Adjusted R-squared:  0.8724
F-statistic: 71.66 on 3 and 28 DF,  p-value: 2.981e-13
```

Two ggplots

You can insert two parallel ggplots with the following code.

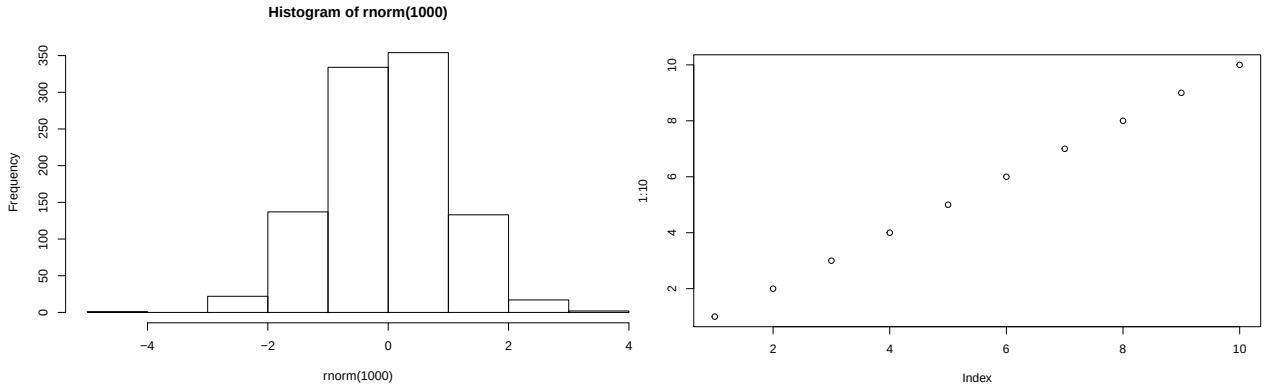
type	title	text	code	option	rowno
2ggplots			ggplot(iris,aes(Sepal.Length,Sepal.Width))+geom_point()		1
			ggplot(iris,aes(Sepal.Length,Sepal.Width,colour=Species))+geom_point()+g		2
			uides(colour=FALSE)		2



Two plots

You can insert two parallel plots with the following code.

type	title	text	code	option	rowno
2plots			hist(rnorm(1000))		1
			plot(1:10)		2



HTML Report

You can get report with HTML format(this file) by following R command.

```
data2HTML(sampleData3)
```