Using CI

Vignette Author

2017-07-24

R Markdown

Load library

```
library(CI)
library(MASS)
```

Generate data for analysis

```
cr = 0.95
df <- mvrnorm(50, mu = c(0,0), Sigma = matrix(c(1,cr,cr,1), ncol = 2), empirical = TRUE)
```

Calculate concordance index

```
CI(x=df[,1], y=df[,2], deltaX=0, deltaY=0, alpha =0, outx = 1, npermut=10000)
```

```
## $ci
## [1] 0.7991837
##
## $p.value
## [1] 0
```

Calculate correlations

```
cor.test(df[,1], df[,2])
```

```
##
##  Pearson's product-moment correlation
##
## data:  df[, 1] and df[, 2]
## t = 21.079, df = 48, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.9131049 0.9714633
## sample estimates:
##  cor
## 0.95
```

```
cor.test(df[,1], df[,2], method = "pearson")
```

```
##
##  Pearson's product-moment correlation
##
## data:  df[, 1] and df[, 2]
## t = 21.079, df = 48, p-value < 2.2e-16
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.9131049 0.9714633
## sample estimates:
##  cor
## 0.95
```

```r
cor.test(df[,1], df[,2], method = "spearman")
```

```
##
##  Spearman's rank correlation rho
##
## data:  df[, 1] and df[, 2]
## S = 1318, p-value < 2.2e-16
## alternative hypothesis: true rho is not equal to 0
## sample estimates:
##       rho
## 0.9367107
```

Vignettes are long form documentation commonly included in packages. Because they are part of the distribution of the package, they need to be as compact as possible. The `html_vignette` output type provides a custom style sheet (and tweaks some options) to ensure that the resulting html is as small as possible. The `html_vignette` format:

- Never uses retina figures
- Has a smaller default figure size
- Uses a custom CSS stylesheet instead of the default Twitter Bootstrap style

Vignette Info

Note the various macros within the `vignette` section of the metadata block above. These are required in order to instruct R how to build the vignette. Note that you should change the `title` field and the `\VignetteIndexEntry` to match the title of your vignette.

Styles

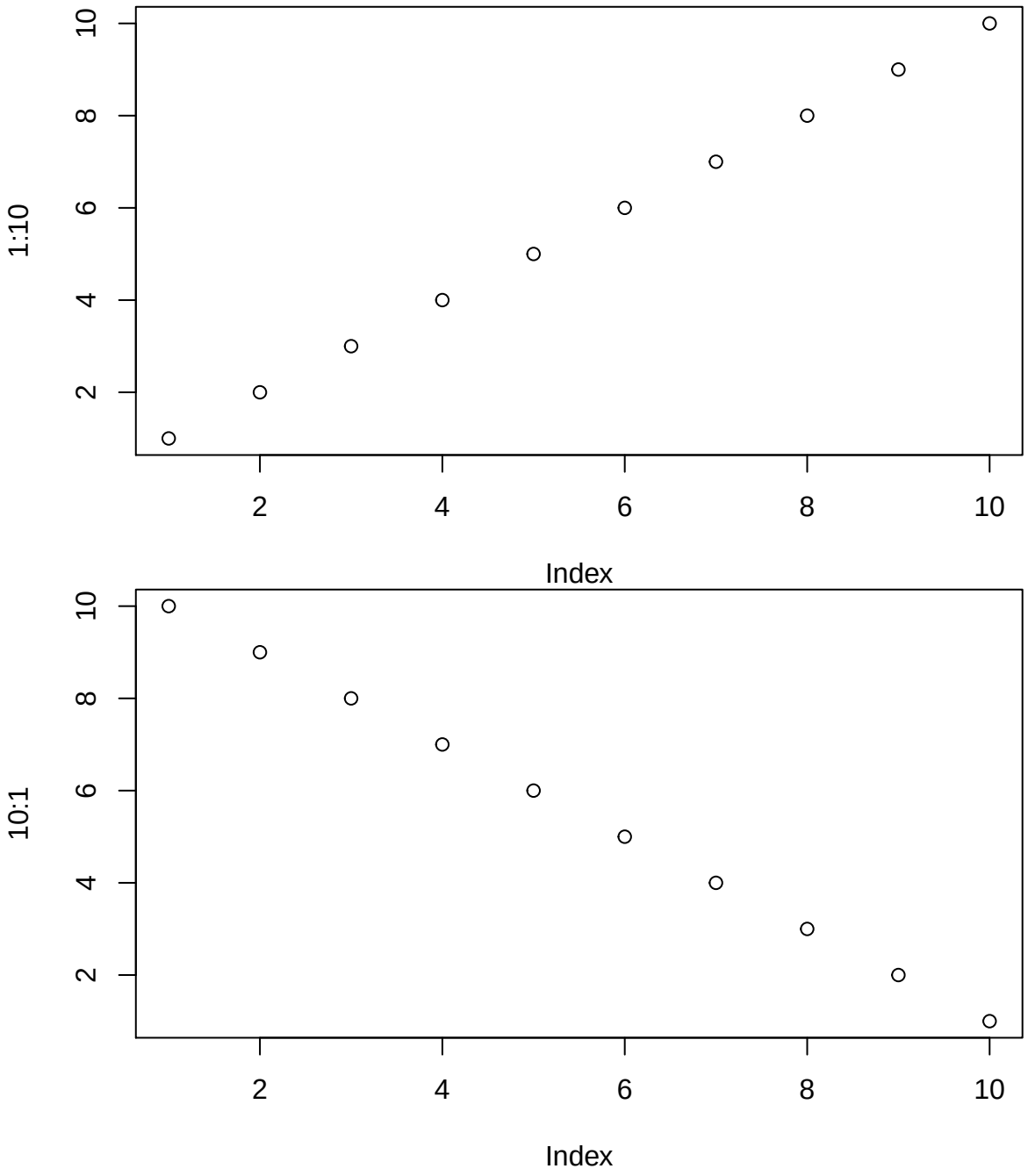
The `html_vignette` template includes a basic CSS theme. To override this theme you can specify your own CSS in the document metadata as follows:

```
output:
  rmarkdown::html_vignette:
    css: mystyles.css
```

Figures

The figure sizes have been customised so that you can easily put two images side-by-side.

```r
plot(1:10)
plot(10:1)
```



You can enable figure captions by `fig_caption: yes` in YAML:

```
output:
  rmarkdown::html_vignette:
    fig_caption: yes
```

Then you can use the chunk option `fig.cap = "Your figure caption."` in **knitr**.

More Examples

You can write math expressions, e.g. $Y = X\beta + \epsilon$, footnotes[1], and tables, e.g. using `knitr::kable()`.

	mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	0	1	4	4
Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	0	1	4	4
Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61	1	1	4	1
Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44	1	0	3	1
Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.02	0	0	3	2
Valiant	18.1	6	225.0	105	2.76	3.460	20.22	1	0	3	1
Duster 360	14.3	8	360.0	245	3.21	3.570	15.84	0	0	3	4
Merc 240D	24.4	4	146.7	62	3.69	3.190	20.00	1	0	4	2
Merc 230	22.8	4	140.8	95	3.92	3.150	22.90	1	0	4	2
Merc 280	19.2	6	167.6	123	3.92	3.440	18.30	1	0	4	4

Also a quote using `>`:

> "He who gives up [code] safety for [code] speed deserves neither." (via)

[1] A footnote here.