

# *Sampler*

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## *Introduction*

This document provides some example sets of functions useful for compiling data from updated observer program information # Overview This was developed originally by Dr. Dan Kimura, modified somewhat by Dr. Martin Dorn, and adopted in it's present bootstrap form in ADMB here.

## *Functions*

`Sampler()`

## *Figures*

### *Margin Figures*

Images and graphics play an integral role in Tufte's work. To place figures or tables in the margin you can use the `fig.margin knitr` chunk option. For example:

```
library(ggplot2)
qplot(Sepal.Length, Petal.Length, data = iris,
      color = Species)
```

Note the use of the `fig.cap` chunk option to provide a figure caption. You can adjust the proportions of figures using the `fig.width` and `fig.height` chunk options. These are specified in inches, and will be automatically scaled down to fit within the handout margin.

## *Equations*

You can also include  $\text{\LaTeX}$  equations in the margin by explicitly invoking the `marginfigure` environment.

Note the use of the `\caption` command to add additional text below the equation.

## *Full Width Figures*

You can arrange for figures to span across the entire page by using the `fig.fullwidth` chunk option.

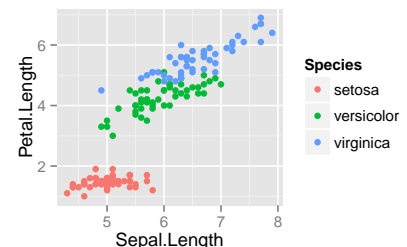


Figure 1: Sepal length vs. petal length, colored by species

$$\frac{d}{dx} \left( \int_0^x f(u) du \right) = f(x).$$

Figure 2: An equation

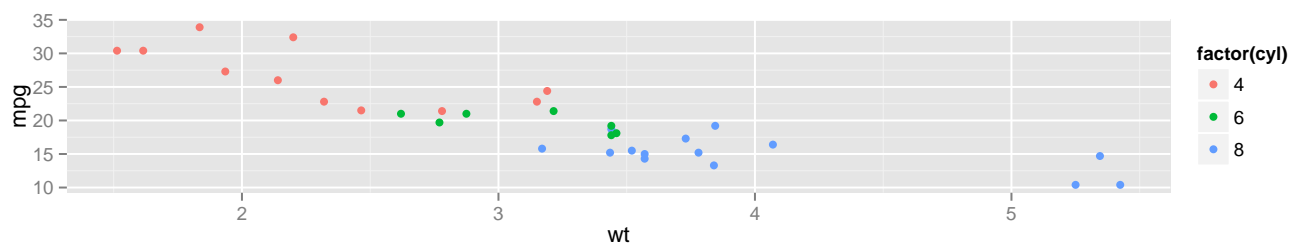


Figure 3: Full width figure

```
qplot(wt, mpg, data = mtcars, colour = factor(cyl))
```

Note the use of the `fig.width` and `fig.height` chunk options to establish the proportions of the figure. Full width figures look much better if their height is minimized.

### Main Column Figures

Besides margin and full width figures, you can of course also include figures constrained to the main column.

```
qplot(factor(cyl), mpg, data = mtcars, geom = "boxplot")
```

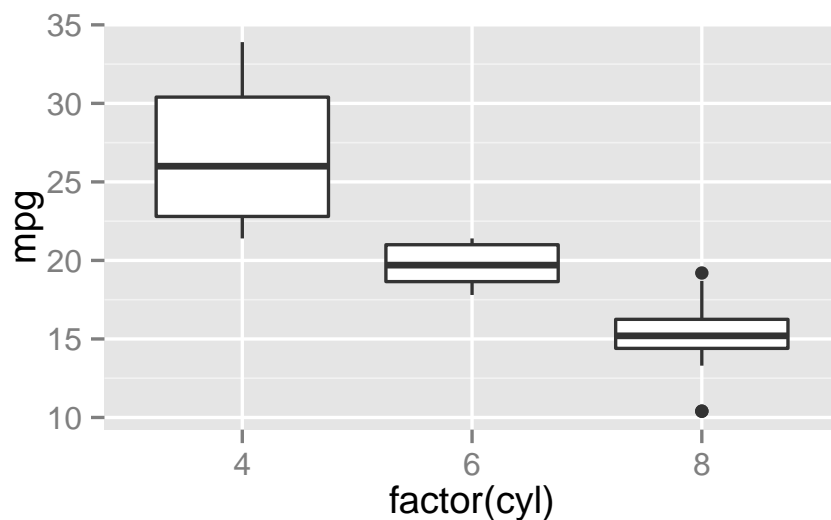


Figure 4: Another figure

### Sidenotes

One of the most prominent and distinctive features of this style is the extensive use of sidenotes. There is a wide margin to provide ample room for sidenotes and small figures. Any use of a footnote will automatically be converted to a sidenote.<sup>1</sup>

<sup>1</sup> This is a sidenote that was entered using a footnote.

If you'd like to place ancillary information in the margin without the sidenote mark (the superscript number), you can use the `\marginnote` command.

Note also that the two footnote references (`tufte_latex` and `books_be`, both defined below) were also included in the margin on the first page of this document.

This is a margin note. Notice that there isn't a number preceding the note.

## Tables

You can use the `xtable` package to format  $\text{\LaTeX}$  tables that integrate well with the rest of the Tufte handout style. Note that it's important to set the `xtable.comment` and `xtable.booktabs` options as shown below to ensure the table is formatted correctly for inclusion in the document.

```
library(xtable)
options(xtable.comment = FALSE)
options(xtable.booktabs = TRUE)
xtable(head(mtcars[, 1:6]), caption = "First rows of mtcars")
```

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.00	6.00	160.00	110.00	3.90	2.62
Mazda RX4 Wag	21.00	6.00	160.00	110.00	3.90	2.88
Datsun 710	22.80	4.00	108.00	93.00	3.85	2.32
Hornet 4 Drive	21.40	6.00	258.00	110.00	3.08	3.21
Hornet Sportabout	18.70	8.00	360.00	175.00	3.15	3.44
Valiant	18.10	6.00	225.00	105.00	2.76	3.46

Table 1: First rows of mtcars