

# *Tufte Handout*

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EUROPEAN FEDERATION  
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## # Introduction

The Tufte- $\text{\LaTeX}$ <sup>1</sup> document classes define a style similar to the style Edward Tufte uses in his books and handouts. Tufte's style is known for its extensive use of sidenotes, tight integration of graphics with text, and well-set typography.<sup>4</sup>

<sup>1</sup> <https://code.google.com/p/tufte-latex/>

## Headings

This style provides a- and b-heads (that is, # and ##), demonstrated above. An error is emitted if you try to use ### and smaller headings.

IN HIS LATER BOOKS<sup>2</sup>, Tufte starts each section with a bit of vertical space, a non-indented paragraph, and sets the first few words of the sentence in small caps. To accomplish this using this style, use the `\newthought` command as demonstrated at the beginning of this paragraph.

<sup>2</sup> [http://www.edwardtufte.com/tufte/books\\_be](http://www.edwardtufte.com/tufte/books_be)

## 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.

	mpg	cyl	disp	hp
Mazda RX4	21.00	6.00	160.00	110.00
Mazda RX4 Wag	21.00	6.00	160.00	110.00
Datsun 710	22.80	4.00	108.00	93.00
Hornet 4 Drive	21.40	6.00	258.00	110.00
Hornet Sportabout	18.70	8.00	360.00	175.00
Valiant	18.10	6.00	225.00	105.00
Duster 360	14.30	8.00	360.00	245.00
Merc 240D	24.40	4.00	146.70	62.00
Merc 230	22.80	4.00	140.80	95.00
Merc 280	19.20	6.00	167.60	123.00
Merc 280C	17.80	6.00	167.60	123.00
Merc 450SE	16.40	8.00	275.80	180.00
Merc 450SL	17.30	8.00	275.80	180.00
Merc 450SLC	15.20	8.00	275.80	180.00

Table 1: First rows of mtcars

## Using pander

Another option is of course the **pander** package to format  $\text{\LaTeX}$  tables. Lorem ipsum dolor sit amet, blandit fusce maecenas nisl non inceptos eget nec. Tortor vitae in varius justo rutrum, cursus venenatis scelerisque. Et tortor ad, nec viverra in in turpis. Porta euismod quis torquent adipiscing consectetur torquent, sociosqu libero. Quis, efficitur porta laoreet dictum consectetur, cum, in mattis ut ac eget orci. A bibendum suscipit. Sit, est, habitasse turpis torquent justo sed maecenas. Et consequat hac volutpat eleifend congue. Ridiculus amet himenaeos hac fringilla, ut porttitor mattis. Ex efficitur ullamcorper in viverra donec purus nec. Etiam nec sed et nunc, sed. Iaculis quisque commodo est donec metus nullam urna platea nisl. Sapien et ac laoreet, aptent per suspendisse consequat, ut urna eu commodo mus mattis. Torquent ex ut, suscipit. Pretium vestibulum odio volutpat sit bibendum, ut pellentesque arcu ac. Sollicitudin amet nullam viverra.

Table 2: First rows of mtcars

	mpg	cyl	disp	hp	drat	wt
<b>Mazda RX4</b>	21	6	160	110	3.9	2.62
<b>Mazda RX4 Wag</b>	21	6	160	110	3.9	2.875
<b>Datsun 710</b>	22.8	4	108	93	3.85	2.32
<b>Hornet 4 Drive</b>	21.4	6	258	110	3.08	3.215
<b>Hornet Sportabout</b>	18.7	8	360	175	3.15	3.44
<b>Valiant</b>	18.1	6	225	105	2.76	3.46

## 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.

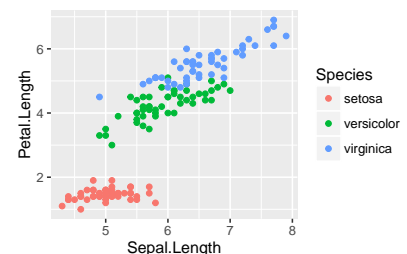


Figure 1: Sepal length vs. petal length, colored by species

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.

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

Figure 2: An equation

### Full Width Figures

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

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

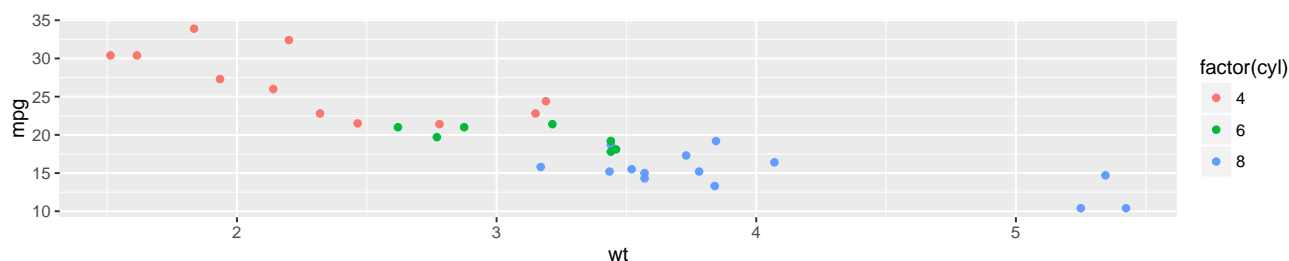


Figure 3: Full width figure

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")
```

### Sidenotes

One of the most prominent and distinctive features of `thalign(xt.Modality) <- c('l', 'p{3.5in}')` 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>3</sup>

<sup>3</sup> This is a sidenote that was entered using a footnote.

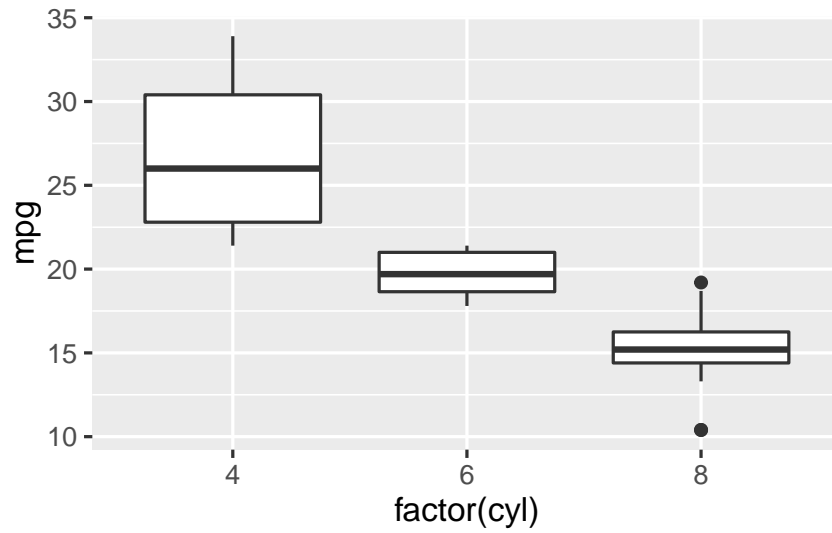


Figure 4: Another figure

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.