


The bartabs package

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Abstract

This package provides support for generating small, horizontal bar data graphics, in the spirit of those discussed starting on p. 123 of Edward Tufte's *The Visual Display of Quantitative Information* (Cheshire, Connecticut, 2007). For example, here is a bar set at 50% of the default width with error bars set at 25%: .

1 Getting the package

The `bartabs` package is hosted in a repository on GitHub at github.com/justinmeza/bartabs. If you have `git` installed, you can check out your own copy with the command:

```
git clone git@github.com:justinmeza/bartabs.git
```

There, you will find the style file as well as this example document.

2 Using the package



Once you obtain the style file, you must declare that you are using it in your document by adding the following line before `\begin{document}`:

```
\usepackage{bartabs}
```

Doing so will let you use several commands to create bar data graphics, described next in examples.



Example 1

A solid bar of a percentage of the default width.

Lorem <code>\mbar{50}</code> ipsum.	Lorem  ipsum.
Lorem <code>\mbar{3.14159}</code> ipsum.	Lorem  ipsum.



Example 2

A solid bar of a normalized fraction of the default width.

Lorem <code>\mbar norm{50}{100}</code> ipsum.	Lorem  ipsum.
Lorem <code>\mbar norm{50}{75}</code> ipsum.	Lorem  ipsum.



Example 3

A solid bar of a percentage of the default width with left and right error lines of a fraction of that width.

Lorem <code>\mbar err{50}{0.5}</code> ipsum.	Lorem  ipsum.
Lorem <code>\mbar err{100}{1.0}</code> ipsum.	Lorem  ipsum.


Example 4

A solid bar of a normalized fraction of the default width with left and right error lines of a fraction of that width.

Lorem <code>\mbar norm err{50}{100}{0.5}</code> ipsum.	Lorem  ipsum.
Lorem <code>\mbar norm err{50}{75}{0.618}</code> ipsum.	Lorem  ipsum.



Example 5

The default width of the bars can be controlled with the `\mbar width` length.

<code>\setlength{\mbar width}{8em}</code>	
Lorem <code>\mbar{50}</code> ipsum	Lorem  ipsum.
Lorem <code>\mbar{3.14159}</code> ipsum.	Lorem  ipsum.



Example 6

The default height of the bars can be controlled with the `\mbar height` length.

<code>\setlength{\mbar height}{3ex}</code>	
Lorem <code>\mbar{50}</code> ipsum.	Lorem  ipsum.
Lorem <code>\mbar{3.14159}</code> ipsum.	Lorem  ipsum.

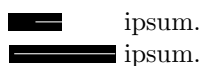
Example 7

The default thickness of the error line can be controlled with the `\mbar err rlinelen` length.

<code>\setlength{\mbar err rlinelen}{2pt}</code>	
Lorem <code>\mbar err{50}{0.5}</code> ipsum.	Lorem  ipsum.
Lorem <code>\mbar err{100}{1.0}</code> ipsum.	Lorem  ipsum.

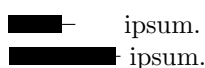
Example 8

A solid bar of a normalized fraction of the default width with a left error line a fraction of that width.

`Lorem \mbarerrrl{50}{0.5} ipsum.
Lorem \mbarerrrl{100}{0.95} ipsum.`


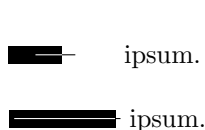
Example 9

A solid bar of a normalized fraction of the default width with a right error line a fraction of that width.

`Lorem \mbarerrrr{50}{0.25} ipsum.
Lorem \mbarerrrr{100}{0.05} ipsum.`


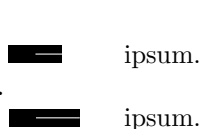
Example 10

A solid bar of a percentage of the default width with right and left error lines separate fraction of that width.

`Lorem \mbarerrrlr{50}{0.5}{0.25} ipsum.
Lorem \mbarerrrlr{100}{0.95}{0.05} ipsum.`


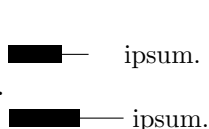
Example 11

A solid bar of a normalized fraction of the default width with a left error line of a fraction of that width.

`Lorem \mbarnormerrrl{50}{100}{0.5} ipsum.
Lorem \mbarnormerrrl{50}{75}{0.618} ipsum.`


Example 12



A solid bar of a normalized fraction of the default width with a right error line of a fraction of that width.

`Lorem \mbarnormerrrr{50}{100}{0.5} ipsum.
Lorem \mbarnormerrrr{50}{75}{0.618} ipsum.`


Example 13

A solid bar of a normalized fraction of the default width with right and left error lines separate fraction of that width.

```





Lorem \mbarnormerrlr{50}{100}{0.5}{0.25} ipsum.
                                Lorem  ipsum.
Lorem \mbarnormerrlr{50}{75}{0.95}{0.05} ipsum.
                                Lorem  ipsum.
```

Example 14

Bars can be used to provide a simple illustration of scientific data in a table.

```

\begin{center}
\begin{tabular}{lrl}
\toprule
Name & \multicolumn{2}{c}{Datum} \\
\midrule
Lorem & $10\pm0.1$ & \mbarerr{10}{0.1} \\
Ipsum & $20\pm0.2$ & \mbarerr{20}{0.2} \\
Dolor & $40\pm0.3$ & \mbarerr{40}{0.3} \\
Sit & $80\pm0.4$ & \mbarerr{80}{0.4} \\
\bottomrule
\end{tabular}
\end{center}
```

Name	Datum	
Lorem	10 ± 0.1	
Ipsum	20 ± 0.2	
Dolor	40 ± 0.3	
Sit	80 ± 0.4	

3 To Do

- Right now, the source code is incredibly ugly. It needs to be cleaned up and made more modular.
- Colored bars and error lines may be interesting to implement.