

# Package ‘mountainplot’

April 17, 2021

**Title** Mountain Plots, Folded Empirical Cumulative Distribution Plots

**Version** 1.3

**License** GPL-3

**Description** Lattice functions for drawing folded empirical cumulative distribution plots, or mountain plots. A mountain plot is similar to an empirical CDF plot, except that the curve increases from 0 to 0.5, then decreases from 0.5 to 1 using an inverted scale at the right side. See Monti (1995) <doi:10.1080/00031305.1995.10476179>.

**URL** <https://kwstat.github.io/mountainplot/>

**BugReports** <https://github.com/kwstat/mountainplot/issues>

**VignetteBuilder** knitr

**Imports** lattice, stats

**Suggests** knitr, latticeExtra, rmarkdown, testthat

**RoxygenNote** 7.1.1

**NeedsCompilation** no

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**Repository** CRAN

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 mountainplot

*Mountainplot*


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### Description

A mountain plot is similar to an empirical CDF, but `_decreases_` from .5 down to 1, using a separate scale on the right axis.

### Usage

```
mountainplot(x, data, ...)

mountainplotyscale.components(...)

## S3 method for class 'formula'
mountainplot(
  x,
  data = NULL,
  prepanel = "prepanel.mountainplot",
  panel = "panel.mountainplot",
  ylab = gettext("Folded Empirical CDF"),
  yscale.components = mountainplotyscale.components,
  scales = list(y = list(alternating = 3)),
  ...
)

## S3 method for class 'numeric'
mountainplot(x, data = NULL, xlab = deparse(substitute(x)), ...)
```

### Arguments

<code>x</code>	Variable in the data.frame 'data'.
<code>data</code>	A data frame
<code>...</code>	Other arguments
<code>prepanel</code>	The prepanel function. Default "prepanel.mountainplot".
<code>panel</code>	The panel function. Default "panel.mountainplot".
<code>ylab</code>	Vertical axis label.
<code>yscale.components</code>	Function for drawing left and right side axes.
<code>scales</code>	The "scales" argument used by lattice functions.
<code>xlab</code>	Horizontal axis label.

### Details

Note that `'mountainplotyscale.components'` is not really intended to be called by the user, but is used by lattice to configure the right-axis ticks and labels.

**Value**

A lattice object

**References**

K. L. Monti. (1995). Folded empirical distribution function curves-mountain plots. *The American Statistician*, 49, 342–345. <http://www.jstor.org/stable/2684570>

Xue, J. H., & Titterington, D. M. (2011). The p-folded cumulative distribution function and the mean absolute deviation from the p-quantile. *Statistics & Probability Letters*, 81(8), 1179-1182.

**Examples**

```
data(singer, package = "lattice")
singer <- within(singer, {
  section <- voice.part
  section <- gsub(" 1", "", section)
  section <- gsub(" 2", "", section)
  section <- factor(section)
})
mountainplot(~height, data = singer, type='b')
mountainplot(~height|voice.part, data = singer, type='p')
mountainplot(~height|section, data = singer, groups=voice.part, type='l',
  auto.key=list(columns=4), as.table=TRUE)
```

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panel.mountainplot      *The panel function for mountainplot*

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**Description**

The panel function for mountainplot

**Usage**

```
panel.mountainplot(x, type = "s", groups = NULL, ref = TRUE, ...)
```

**Arguments**

x	The data to be plotted.
type	The type of ecdf line to use. Default is 's' square.
groups	Variable to use for grouping
ref	If TRUE, draw horizontal reference lines at 0,1
...	Other arguments

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`prepanel.mountainplot` *The prepanel function for mountainplot*

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**Description**

The prepanel function for mountainplot

**Usage**

```
prepanel.mountainplot(x, ...)
```

**Arguments**

<code>x</code>	The data to be plotted.
<code>...</code>	Other arguments

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