

Package ‘mountainplot’

July 23, 2025

Title Mountain Plots, Folded Empirical Cumulative Distribution Plots

Version 1.4

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](https://doi.org/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

Encoding UTF-8

RoxygenNote 7.1.2

NeedsCompilation no

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Repository CRAN

Date/Publication 2022-05-02 07:00:06 UTC

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mountainplot

Mountainplot

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)
```

panel.mountainplot *The panel function for mountainplot*

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

prepanel.mountainplot *The prepanel function for mountainplot*

Description

The prepanel function for mountainplot

Usage

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

Arguments

x	The data to be plotted.
...	Other arguments

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