Package: ggbrace (via r-universe)

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Type Package

Title Curly Braces for 'ggplot2'

Depends R (>= 4.3)

Imports ggplot2 (>= 3.4.2), stats (>= 4.3.1)

Version 0.1.1

Description Provides curly braces in 'ggplot2' plus matching text. stat_brace() plots braces partially in the confines of data so that the brace is set apart from it. stat_bracetext() plots corresponding text, fitting to the braces from stat_brace().

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Encoding UTF-8

LazyData true

RoxygenNote 7.2.3

URL https://github.com/NicolasH2/ggbrace

Suggests knitr, rmarkdown

Repository https://nicolash2.r-universe.dev

RemoteUrl https://github.com/nicolash2/ggbrace

RemoteRef HEAD

RemoteSha 037a3ce68554b4913b73fbea5bc35dab3583053c

Contents

`.coordCorrection` *Imports: stats*

Description

Imports: stats

Usage

```
.coordCorrection(
  x,
  y,
  rotate,
  mid,
  textdistance = NULL,
  distance,
  outerstart,
  width,
  outside
)
```

Arguments

`x`	vector, x values of all data points
`y`	vector, y value of all data points
`rotate`	number, defines where the brace is pointing to: 0=up, 90=right, 180=down, 270=left. When specified by user, will overwrite other directions the brace might have from x/y coordinates.
`mid`	number, where the pointer is within the bracket space (between 0.25 and 0.75). If NULL (default), will be determined automatically based on the data.
`textdistance`	number, distance of the label to the brace pointer
`distance`	number, space between the brace and the nearest data point
`outerstart`	number, overwrites distance and provides one coordinate for all braces
`width`	number, how wide should the braces be? If NULL (default), will be determined automatically based on the data.
`outside`	boolean, should the brace be outside of the data area or cover the data area?

.seekBrace *Imports: stats*

Description

Imports: stats

Usage

```
.seekBrace(x, y, rotate, bending, npoints)
```

Arguments

x	vector, x values of all data points
y	vector, y value of all data points
rotate	number, defines where the brace is pointing to: 0=up, 90=right, 180=down, 270=left. When specified by user, will overwrite other directions the brace might have from x/y coordinates.
bending	number, how strongly the curves of the braces should be bent (the higher the more round). Note: too high values will result in the brace showing zick-zack lines
npoints	integer, number of points generated for the brace curves (resolution). This number will be rounded to be a multiple of 4 for calculation purposes.

stat_brace *create curly braces as a layer in ggplot*

Description

Imports: ggplot2

Usage

```
stat_brace(
  mapping = NULL,
  data = NULL,
  geom = "path",
  position = "identity",
  ...,
  rotate = 0,
  width = NULL,
  mid = NULL,
  outside = TRUE,
  distance = NULL,
```

```
  outerstart = NULL,
  bending = NULL,
  npoints = 100,
  show.legend = FALSE,
  inherit.aes = TRUE
)
```

Arguments

mapping	Set of aesthetic mappings created by aes(). If specified and inherit.aes = TRUE (the default), it is combined with the default mapping at the top level of the plot. You must supply mapping if there is no plot mapping.
data	The data to be displayed in this layer. There are three options: If NULL, the default, the data is inherited from the plot data as specified in the call to ggplot(). A data.frame, or other object, will override the plot data. All objects will be fortified to produce a data frame. See fortify() for which variables will be created. A function will be called with a single argument, the plot data. The return value must be a data.frame, and will be used as the layer data. A function can be created from a formula (e.g. ~ head(.x, 10)).
geom	The geometric object to use to display the data, either as a ggproto Geom subclass or as a string naming the geom stripped of the geom_ prefix (e.g. "point" rather than "geom_point")
position	Position adjustment, either as a string naming the adjustment (e.g. "jitter" to use position_jitter), or the result of a call to a position adjustment function. Use the latter if you need to change the settings of the adjustment.
...	Other arguments passed on to layer(). These are often aesthetics, used to set an aesthetic to a fixed value, like colour = "red" or size = 3. They may also be parameters to the paired geom/stat.
rotate	number, defines where the brace is pointing to: 0=up, 90=right, 180=down, 270=left. When specified by user, will overwrite other directions the brace might have from x/y coordinates.
width	number, how wide should the braces be? If NULL (default), will be determined automatically based on the data.
mid	number, where the pointer is within the bracket space (between 0.25 and 0.75). If NULL (default), will be determined automatically based on the data.
outside	boolean, should the brace be outside of the data area or cover the data area?
distance	number, space between the brace and the nearest data point
outerstart	number, overwrites distance and provides one coordinate for all braces
bending	number, how strongly the curves of the braces should be bent (the higher the more round). Note: too high values will result in the brace showing zick-zack lines
npoints	integer, number of points generated for the brace curves (resolution). This number will be rounded to be a multiple of 4 for calculation purposes.

show.legend — logical. Should this layer be included in the legends? NA, the default, includes if any aesthetics are mapped. FALSE never includes, and TRUE always includes. It can also be a named logical vector to finely select the aesthetics to display.

inherit.aes — If FALSE, overrides the default aesthetics, rather than combining with them. This is most useful for helper functions that define both data and aesthetics and shouldn't inherit behaviour from the default plot specification, e.g. borders().

Value

ggplot2 layer object (geom_path) that can directly be added to a ggplot2 object. If a label was provided, a another layer (geom_text) is added.

Examples

```
library(ggbrace)
library(ggplot2)
data(iris)

# regular braces
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace()

 # rotated braces
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(rotate = 90)

 # braces inside the given coordinates
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(outside = FALSE)

 # braces with a defined distance from their data points
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(distance = 2)

 # braces starting at a defined point
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(outerstart = 5)

 # braces starting at a defined point and with defined width
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(outerstart = 5, width = 1)

 # braces starting at a defined point and with defined width and defined curve bending
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(outerstart = 5, width = 1, bending = 0.1)
```

```
 # braces outside of the plotting area
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace(outerstart = 4.5) +
 coord_cartesian(y=range(iris$Sepal.Width), clip = "off") +
 theme(plot.margin = unit(c(0.25, 0.11, 0.11, 0.11), units="npc"))

 # braces with discrete values
 df <- data.frame(x = c("a","b","c","d","e"), y = 1:5)
 ggplot(df, aes(x, y)) +
   geom_point() +
   stat_brace(aes(x=seq_along(x)))
```

`stat_bracetext` *create text for curly braces as a layer in ggplot*

Description

Imports: ggplot2

Usage

```
stat_bracetext(
  mapping = NULL,
  data = NULL,
  geom = "text",
  position = "identity",
  ...,
  rotate = 0,
  width = NULL,
  mid = NULL,
  outside = TRUE,
  distance = NULL,
  outerstart = NULL,
  textdistance = NULL,
  show.legend = FALSE,
  inherit.aes = TRUE
)
```

Arguments

`mapping`	Set of aesthetic mappings created by `aes()`. If specified and `inherit.aes = TRUE` (the default), it is combined with the default mapping at the top level of the plot. You must supply `mapping` if there is no plot mapping.

data	The data to be displayed in this layer. There are three options: If NULL, the default, the data is inherited from the plot data as specified in the call to ggplot(). A data.frame, or other object, will override the plot data. All objects will be fortified to produce a data frame. See fortify() for which variables will be created. A function will be called with a single argument, the plot data. The return value must be a data.frame, and will be used as the layer data. A function can be created from a formula (e.g. ~ head(.x, 10)).
geom	The geometric object to use to display the data, either as a ggproto Geom subclass or as a string naming the geom stripped of the geom_ prefix (e.g. "point" rather than "geom_point")
position	Position adjustment, either as a string naming the adjustment (e.g. "jitter" to use position_jitter), or the result of a call to a position adjustment function. Use the latter if you need to change the settings of the adjustment.
...	Other arguments passed on to layer(). These are often aesthetics, used to set an aesthetic to a fixed value, like colour = "red" or size = 3. They may also be parameters to the paired geom/stat.
rotate	number, defines where the brace is pointing to: 0=up, 90=right, 180=down, 270=left. When specified by user, will overwrite other directions the brace might have from x/y coordinates.
width	number, how wide should the braces be? If NULL (default), will be determined automatically based on the data.
mid	number, where the pointer is within the bracket space (between 0.25 and 0.75). If NULL (default), will be determined automatically based on the data.
outside	boolean, should the brace be outside of the data area or cover the data area?
distance	number, space between the brace and the nearest data point
outerstart	number, overwrites distance and provides one coordinate for all braces
textdistance	number, distance of the label to the brace pointer
show.legend	logical. Should this layer be included in the legends? NA, the default, includes if any aesthetics are mapped. FALSE never includes, and TRUE always includes. It can also be a named logical vector to finely select the aesthetics to display.
inherit.aes	If FALSE, overrides the default aesthetics, rather than combining with them. This is most useful for helper functions that define both data and aesthetics and shouldn't inherit behaviour from the default plot specification, e.g. borders().

Value

ggplot2 layer object (geom_path) that can directly be added to a ggplot2 object. If a label was provided, another layer is added.

Examples

```
library(ggbrace)
library(ggplot2)
```

```
data(iris)
ggplot(iris, aes(x=Sepal.Length, y=Sepal.Width, color=Species, label=Species)) +
 geom_point() +
 stat_brace() +
 stat_bracetext()
```

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