Package 'ggfun'

August 31, 2022

Title Miscellaneous Functions for 'ggplot2'

Version 0.0.7

Description Useful functions to edit 'ggplot' object (e.g., setting fonts for theme and layers, adding rounded rectangle as background for each of the legends).

Imports ggplot2, grid, rlang, utils

Suggests ggplotify, knitr, rmarkdown, prettydoc, tidyr, ggnewscale

VignetteBuilder knitr

ByteCompile true

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NeedsCompilation no

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R topics documented:

`element_roundrect` *round rectangle borders and backgrounds*

Description

round rectangle borders and backgrounds

Usage

```
element_roundrect(
  fill = NULL,
  colour = NULL,
  size = NULL,
  linetype = NULL,
  color = NULL,
  r = grid::unit(0.1, "snpc"),
  inherit.blank = FALSE
)
```

Arguments

`fill`	Fill colour.
`colour, color`	Line/border colour. Color is an alias for colour.
`size`	Line/border size in mm; text size in pts.
`linetype`	Line type. An integer (0:8), a name (blank, solid, dashed, dotted, dotdash, longdash, twodash), or a string with an even number (up to eight) of hexadecimal digits which give the lengths in consecutive positions in the string.
`r`	the radius of the rounded corners, a `unit` object, default is unit(0.1, 'snpc').
`inherit.blank`	Should this element inherit the existence of an `element_blank` among its parents? If `TRUE` the existence of a blank element among its parents will cause this element to be blank as well. If `FALSE` any blank parent element will be ignored when calculating final element state.

Examples

```
library(ggplot2)
p <- ggplot(mpg, aes(displ, cty)) + geom_point()
p <- p + facet_grid(cols = vars(cyl))
p <- p + theme(strip.background=element_roundrect(fill="grey40", color=NA, r=0.15))
p
```

```
p2 <- ggplot(mtcars, aes(mpg, disp, color=factor(cyl), size=cyl)) +
      geom_point()
p2 + theme(legend.background=element_roundrect(color="#808080", linetype=2))
```

`facet_set` *facet_set*

Description

add a facet label to a ggplot or change facet label of a ggplot

Usage

```
facet_set(label, side = "t", angle = NULL)
```

Arguments

`label`	a character or a named vector to label the plot
`side`	to label the plot at which side, either 't' (top) or 'r' (right)
`angle`	angle of the facet label. Default is 0 for side='t' and -90 for side='r'.

Value

a ggplot with facet label

`get_aes_var` *get_aes_var*

Description

extract aes mapping, compatible with ggplot2 < 2.3.0 & > 2.3.0

Usage

```
get_aes_var(mapping, var)
```

Arguments

`mapping`	aes mapping
`var`	variable

Value

mapped var

Author(s)

guangchuang yu

ggbreak2ggplot *ggbreak2ggplot*

Description

convert a ggbreak object to a ggplot object

Usage

```
ggbreak2ggplot(plot)
```

Arguments

plot	a ggbreak object

Value

a ggplot object

Author(s)

Guangchuang Yu

gglegend *gglegend*

Description

add manual setting legend

Usage

```
gglegend(mapping, data, geom, p = NULL)
```

Arguments

mapping	aes mapping for the 'geom'. The first mapping should be the one for the legend, while others maybe needed for the 'geom' (e.g., label for geom_text).
data	input data frame. If users want to mapping 'VALUE' to 'colour', the input data should contains 'VALUE' and 'colour' (actual value, e.g., 'red' and 'blue') variable.
geom	a geom to plot the data for generating the legend and the geom will be plotted invisible.
p	a ggplot object. If NULL, the 'last_plot()' will be used.

Details

add additional legend to a ggplot

Value

a ggplot object

Author(s)

Guangchuang Yu

Examples

```
library(ggplot2)
p <- ggplot(mtcars, aes(mpg, disp)) + geom_point()
data <- data.frame(colour = c("red",  "blue"), VALUE = c("A", "B"))
gglegend(aes(colour = VALUE, label=VALUE), data, geom_text, p)
```

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identify.gg *identify*

Description

identify node by interactive click

Usage

```
## S3 method for class 'gg'
identify(x = last_plot(), col = "auto", ...)
```

Arguments

x	tree view
col	selected columns to extract. Default is "auto" which will select all columns for 'ggplot' object and 'node' column for 'ggtree' object
...	additional parameters, normally ignored

Value

closest data point

Author(s)

Guangchuang Yu

`is.ggbreak` *is.ggbreak*

Description

check whether a plot is a ggbreak object (including 'ggbreak', 'ggwrap' and 'ggcut' that defined in the 'ggbreak' package)

Usage

```
is.ggbreak(plot)
```

Arguments

`plot`	a plot obejct

Value

logical value

Author(s)

Guangchuang Yu

`is.ggtree` *is.ggtree*

Description

test whether input object is produced by ggtree function

Usage

```
is.ggtree(x)
```

Arguments

`x`	object

Value

TRUE or FALSE

Author(s)

Guangchuang Yu

keybox *keybox*

Description

draw border for each of the ggplot legends

Usage

```
keybox(p, grob = "roundrect", gp = NULL)
```

Arguments

p	a ggplot object
grob	one of 'rect' or 'roundrect'
gp	graphic parameter

Value

grob object

Author(s)

Guangchuang Yu

Examples

```
library(ggplot2)
p <- ggplot(mtcars, aes(mpg, disp, color=factor(cyl), size=cyl)) + geom_point()
keybox(p, 'roundrect', gp = gpar(col = '#808080', lty = "dashed"))
```

set_font *set_font*

Description

setting font for ggplot (axis text, label, title, etc.)

Usage

```
set_font(p, family = "sans", fontface = NULL, size = NULL, color = NULL)
```

Arguments

p	ggplot object
family	font fammily
fontface	font face
size	font size
color	font color

Value

TableGrob object

Author(s)

Guangchuang Yu

Examples

```
library(grid)
library(ggplot2)
d <- data.frame(x=rnorm(10), y=rnorm(10), lab=LETTERS[1:10])
p <- ggplot(d, aes(x, y)) + geom_text(aes(label=lab), size=5)
set_font(p, family="Times", fontface="italic", color='firebrick')
```

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theme_nothing *theme_nothing*

Description

A theme that only show the plot panel

Usage

```
theme_nothing(base_size = 11, base_family = "")
```

Arguments

base_size	font size
base_family	font family

Value

ggplot2 theme

Author(s)

Guangchuang Yu

theme_stamp *set the theme of ggplot object with the striped background style.*

Description

set the theme of ggplot object with the striped background style.

Usage

```
theme_stamp(colour = c("grey90", "white"), axis = "y", ...)
```

Arguments

colour	character the color of the striped background, default is c('grey90', 'white').
axis	character which grid of axis will be filled, default is 'y'.
...	additional parameter, see also 'theme' of 'ggplot2'.

Examples

```
library(ggplot2)
iris |> tidyr::pivot_longer(
    cols = !Species,
    names_to = 'var',
    values_to = 'value'
  ) |>
ggplot(
  aes(x=var, y=Species, color=value, size=value)
) +
geom_point() -> p
p +
theme_stamp(
  colour = c('grey90', 'white'),
  axis = 'y',
  axis.line.y=element_line()
)
p +
theme_stamp(
  colour = c('grey90', 'white'),
  axis = 'x',
  axis.line.x = element_line()
)
```

theme_transparent *theme_transparent*

Description

transparent background theme

Usage

```
theme_transparent(...)
```

Arguments

...	additional parameter to tweak the theme

Value

ggplot object

Author(s)

Guangchuang Yu with contributions from Hugo Gruson

yrange *plot range of a ggplot object*

Description

extract x or y ranges of a ggplot

Usage

```
yrange(gg, type = "limit", region = "panel")

xrange(gg, type = "limit", region = "panel")

ggrange(gg, var, type = "limit", region = "panel")
```

Arguments

gg	a ggplot object
type	one of 'limit' or 'range', if 'region == "plot"', to extract plot limit or plot data range
region	one of 'panel' or 'plot' to indicate extracting range based on the plot panel (scale expand will be counted) or plot data (scale expand will not be counted)
var	either 'x' or 'y'

Value

range of selected axis

Author(s)

Guangchuang Yu

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