inside-R

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ggpairs {GGally}

ggpairs - A ggplot2 generalized pairs plot

`Package: GGally`
Version: 1.0.1

Description

Make a matrix of plots with a given data set

Usage

```
ggpairs(data, mapping = NULL, columns = 1:ncol(data), title = "",
  upper = list(), lower = list(), diag = list(), params = NULL, ...,
  axisLabels = "show", columnLabels = colnames(data[, columns]),
  showStrips = NULL, legends = FALSE, verbose = FALSE)
```

Arguments

`data`
data set using. Can have both numerical and categorical data.

`mapping`
aesthetic mapping (besides x and y). See `aes()`. If `mapping` is numeric, `columns` will be set to the `mapping` value and `mapping` will be set to `NULL`.

`columns`
which columns are used to make plots. Defaults to all columns.

`title`
title for the graph

`upper`
see Details

`lower`
see Details

`diag`
see Details

`params`
deprecated. Please see `wrap_fn_with_param_arg`

`...`
other parameters being supplied to geom's aes, such as color

`axisLabels`
either "show" to display axisLabels, "internal" for labels in the diagonal plots, or "none" for no axis labels

`columnLabels`
label names to be displayed. Defaults to names of columns being used.

`showStrips`
boolean to determine if each plot's strips should be displayed. `NULL` will default to the top and right side plots only. `TRUE` or `FALSE` will turn all strips on or off respectively.

`legends`
boolean to determine the printing of the legend in each plot. Not recommended.

`verbose`
boolean to determine the printing of "Plot #1, Plot #2..."

Details

upper and lower are lists that may contain the variables 'continuous', 'combo', 'discrete', and 'na'. Each element of the list may be a function or a string. If a string is supplied, it must implement one of the following options:

continuous
: exactly one of ('points', 'smooth', 'density', 'cor', 'blank'). This option is used for continuous X and Y data.

combo
: exactly one of ('box', 'dot', 'facethist', 'facetdensity', 'denstrip', 'blank'). This option is used for either continuous X and categorical Y data or categorical X and continuous Y data.

discrete
: exactly one of ('facetbar', 'ratio', 'blank'). This option is used for categorical X and Y data.

na
: exactly one of ('na', 'blank'). This option is used when all X data is NA, all Y data is NA, or either all X or Y data is NA.

diag is a list that may only contain the variables 'continuous', 'discrete', and 'na'. Each element of the diag list is a string implementing the following options:

continuous
: exactly one of ('densityDiag', 'barDiag', 'blankDiag'). This option is used for continuous X data.

discrete
: exactly one of ('barDiag', 'blankDiag'). This option is used for categorical X and Y data.

na
: exactly one of ('naDiag', 'blankDiag'). This option is used when all X data is NA.

If 'blank' is ever chosen as an option, then ggpairs will produce an empty plot.

If a function is supplied to an upper, lower, or diag, it should implement the function api of `function(data, mapping, ...){#make ggplot2 plot}`. If a specific function needs its parameters set, `wrap()` the function with its parameters.

Values

ggpair object that if called, will print

References

John W Emerson, Walton A Green, Barret Schloerke, Jason Crowley, Dianne Cook, Heike Hofmann, Hadley Wickham. The Generalized Pairs Plot. Journal of Computational and Graphical Statistics, vol. 22, no. 1, pp. 79-91, 2012.

See Also

wrap

Examples

```
# plotting is reduced to the first couple of examples.
# Feel free to print the ggpair objects created in the examples

data(tips, package = "reshape")
pm <- ggpairs(tips[, 1:3])
# pm
pm <- ggpairs(tips, 1:3, columnLabels = c("Total Bill", "Tip", "Sex"))
# pm
pm <- ggpairs(tips, upper = "blank")
# pm


# Custom Example
pm <- ggpairs(
  tips[, c(1, 3, 4, 2)],
  upper = list(continuous = "density", combo = "box"),
  lower = list(continuous = "points", combo = "dot")
)
# pm

# Use sample of the diamonds data
data(diamonds, package="ggplot2")
diamonds.samp <- diamonds[sample(1:dim(diamonds)[1], 200), ]

# Custom Example
pm <- ggpairs(
 diamonds.samp[, 1:5],
 mapping = ggplot2::aes(color = cut),
 upper = list(continuous = wrap("density", alpha = 0.5), combo = "box"),
```

```
 lower = list(continuous = wrap("points", alpha = 0.3), combo = wrap("dot", alpha = 0.4)),
 title = "Diamonds"
)
# pm

# Only Variable Labels on the diagonal (no axis labels)
pm <- ggpairs(tips[, 1:3], axisLabels="internal")
# pm
# Only Variable Labels on the outside (no axis labels)
pm <- ggpairs(tips[, 1:3], axisLabels="none")
# pm

# Custom Examples
custom_car <- ggpairs(mtcars[, c("mpg", "wt", "cyl")], upper = "blank", title = "Custom Example")
# ggplot example taken from example(geom_text)
  plot <- ggplot2::ggplot(mtcars, ggplot2::aes(x=wt, y=mpg, label=rownames(mtcars)))
  plot <- plot +
    ggplot2::geom_text(ggplot2::aes(colour=factor(cyl)), size = 3) +
    ggplot2::scale_colour_discrete(l=40)
custom_car[1, 2] <- plot
personal_plot <- ggally_text(
  "ggpairs allows you\nto put in your\nown plot.\nLike that one.\n <---"
)
custom_car[1, 3] <- personal_plot
# custom_car
```

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