Package 'aplot'

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Title Decorate a 'ggplot' with Associated Information

Version 0.1.6

Description For many times, we are not just aligning plots as what 'cowplot' and 'patchwork' did. Users would like to align associated information that requires axes to be exactly matched in subplots, e.g. hierarchical clustering with a heatmap. This package provides utilities to aligns associated subplots to a main plot at different sides (left, right, top and bottom) with axes exactly matched.

Imports ggfun (>= 0.0.6), ggplot2, ggplotify, patchwork, magrittr, methods, utils

Suggests ggtree

URL <https://github.com/YuLab-SMU/aplot>

License Artistic-2.0

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NeedsCompilation no

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R topics documented:

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gglist   *construct a 'gglist' object*

Description

constructure a 'gglist' object that contains a list of plots ('gglist') and parameters (via '...'), the object can be displayed via the 'plot_list()' function.

Usage

```
gglist(gglist, ...)
```

Arguments

gglist   a list of plots

...   parameters for plotting the 'gglist'

Value

gglist object

Author(s)

Guangchuang Yu

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insert_left   *plot-insertion*

Description

insert an associated plot to left, right, top and bottom of a main plot

Usage

```
insert_left(.data, plot, width = 1)

insert_right(.data, plot, width = 1)

insert_top(.data, plot, height = 1)

insert_bottom(.data, plot, height = 1)
```

Arguments

`.data`	an 'aplot' or 'gg' object
`plot`	a 'gg' plot to be inserted
`width`	relative width to the main plot
`height`	relative height to the main plot

Details

The first input serve as a main plot, and other plots can be progressively inserted to different sides on left, right, top and bottom.

Value

an 'aplot' object

Author(s)

Guangchuang Yu

Examples

```
library(ggplot2)
library(aplot)

p <- ggplot(mtcars, aes(mpg, disp)) + geom_point()
p2 <- ggplot(mtcars, aes(mpg)) +
    geom_density(fill='steelblue', alpha=.5) +
        ggtree::theme_dendrogram()
p3 <- ggplot(mtcars, aes(x=1, y=disp)) +
    geom_boxplot(fill='firebrick', alpha=.5) +
    theme_void()
ap <- p %>%
    insert_top(p2, height=.3) %>%
    insert_right(p3, width=.1)
```

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plot_list   *plot a list of ggplot objects*

Description

plot a list of ggplot objects using patchwork, similar to 'cowplot::plot_grid(plotlist)'

Usage

```
plot_list(
  ...,
  gglist = NULL,
  ncol = NULL,
  nrow = NULL,
  byrow = NULL,
  widths = NULL,
  heights = NULL,
  guides = NULL,
  labels = NULL,
  tag_levels = NULL,
  tag_size = 14,
  design = NULL,
  output = "patchwork"
)
```

Arguments

...	list of plots to be arranged
gglist	(optional) list of plots
ncol	number of columns
nrow	number of rows
byrow	If "FALSE" the plots will be filled in in column-major order
widths	relative widths
heights	relative heights
guides	A string specifying how guides should be treated in the layout.
labels	manual specified labels to label plots
tag_levels	format to label plots, will be disable if 'labels' is not NULL
tag_size	size of tags
design	specification of the location of areas in the layout
output	one of 'gglist' or 'patchwork'

Value

composite plot

Author(s)

Guangchuang Yu

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xlim2 *xlim2*

Description

set axis limits (x or y) of a 'ggplot' object (left hand side of '+') based on the x ('xlim2') or y ('ylim2') limits of another 'ggplot' object (right hand side of '+'). This is useful for using 'cowplot' or 'patchwork' to align 'ggplot' objects.

Usage

```
xlim2(gg, limits = NULL)

ylim2(gg, limits = NULL)
```

Arguments

gg   ggplot object

limits   vector of limits. If NULL, determine from 'gg'.

Value

ggplot2 object with new limits

Author(s)

Guangchuang Yu

Examples

```
library(ggplot2)
library(aplot)
p1 <- ggplot(mtcars, aes(cyl)) + geom_bar()
p2 <- ggplot(subset(mtcars, cyl != 4), aes(cyl)) + geom_bar()
p2 + xlim2(p1)
```

Index