Package 'aplot'

July 22, 2020

Title Decorate a 'ggplot' with Associated Information

Version 0.0.5

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 ggplot2, patchwork, magrittr, methods

Suggests rvcheck, ggtree

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

License Artistic-2.0

Encoding UTF-8

LazyData true

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NeedsCompilation no

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R topics documented:

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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, ncol = NULL, nrow = NULL, widths = NULL, heights = NULL, ...)
```

Arguments

gglist	list of ggplot objects
ncol	number of columns
nrow	number of rows
widths	relative widths
heights	relative heights
...	additional parameters that passed to plot_layout

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)
```

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 yrange   *plot range of a ggplot object*

Description

extract x or y ranges of a ggplot

Usage

```
yrange(gg)

xrange(gg)
```

Arguments

gg   a ggplot object

Value

range of selected axis

Author(s)

Guangchuang Yu

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