Package ‘aplot’

September 3, 2020

Title Decorate a ‘ggplot’ with Associated Information

Version 0.0.6

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 ggplot2, patchwork, magrittr, methods

Suggests rvcheck, ggtree

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

License Artistic-2.0

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

NeedsCompilation no

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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) +
is.ggtree

```r
theme_void()
ap <- p %>%
  insert_top(p2, height=.3) %>%
  insert_right(p3, width=.1)
```

is.ggtree  is.ggtree

**Description**

test whether input object is produced by ggtree function

**Usage**

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

**Arguments**

- `x`  object

**Value**

TRUE or FALSE

**Author(s)**

Guangchuang Yu

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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**

```r
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

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

<table>
<thead>
<tr>
<th>gg</th>
<th>ggplot object</th>
</tr>
</thead>
<tbody>
<tr>
<td>limits</td>
<td>vector of limits. If NULL, determine from 'gg'.</td>
</tr>
</tbody>
</table>

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)
yr
range

plot range of a ggplot object

Description

extract x or y ranges of a ggplot

Usage

yr
range(gg)

xrange(gg)

Arguments

gg a ggplot object

Value

range of selected axis

Author(s)

Guangchuang Yu
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