Package 'figpatch'

May 2, 2025

Title Easily Arrange External Figures with Patchwork Alongside 'ggplot2' Figures

Version 0.3.0

Description For including external figures into an assembled {patchwork}. This enables the creation of more complex figures that include images alongside plots.

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Encoding UTF-8

Language en-US

RoxygenNote 7.3.2

URL https://github.com/BradyAJohnston/figpatch, https://BradyAJohnston.github.io/figpatch/

BugReports https://github.com/BradyAJohnston/figpatch/issues

Imports ggplot2, magick, magrittr, methods, patchwork

Suggests covr, knitr, rmarkdown, spelling, testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

Date/Publication 2025-05-02 08:00:02 UTC

Contents

`fig` *Parse Image to a Fig*

Description

Read image and convert to ggplot object, for use with other ggplot objects when assembling with the {patchwork} package. Can also specify a border.

Usage

```
fig(
  path,
  aspect.ratio = "default",
  link_dim = TRUE,
  b_col = NULL,
  b_size = 1,
  b_pos = "offset",
  b_margin = ggplot2::margin(4, 4, 4, 4)
)
```

Arguments

`path`	Path to image file.
`aspect.ratio`	Manually override the image's aspect ratio or set "free" to allow fig to be resized by patchwork.
`link_dim`	Logical, whether to lock the dimensions & aspect.ratio of the aligned plots to that of this fig.
`b_col`	Colour of the border line.
`b_size`	Size of the border line.
`b_pos`	Whether the border is 'offset' (expands out from figure) or 'inset' and expands inwards, partially covering up the figure.
`b_margin`	Margin around the fig. Use `ggplot2::margin()`

Value

{ggplot2} object

Examples

```
library(figpatch)
library(ggplot2)

# Attach the fig image file
image <- system.file("extdata", "fig.png", package = "figpatch", mustWork = TRUE)
```

```
# Read in the image as a 'fig'
img <- fig(image)

img
```

`fig_lab` *Add Label to a Fig*

Description

Add Label to a Fig

Usage

```
fig_lab(
  fig,
  lab,
  pos = "bottom",
  fontfamily = NULL,
  fontface = NULL,
  colour = NULL,
  size = NULL,
  lineheight = NULL,
  hjust = NULL,
  vjust = NULL,
  angle = NULL,
  margin = ggplot2::margin(4, 4, 4, 4)
)
```

Arguments

`fig`	Fig to be labelled.
`lab`	String of label to be added to the fig.
`pos`	Position of the fig, either 'top', 'bottom', 'left', or 'right'.
`fontfamily`	Font family for the label.
`fontface`	Font face for the label (i.e. "italic")
`colour`	Colour of the label text.
`size`	Size of the label text.
`lineheight`	Lineheight of the label text.
`hjust`	hjust of the label text.
`vjust`	vjust of the label text.
`angle`	Angle of the label text.
`margin`	Margin around the label text. Use `ggplot2::margin()`

Value

{ggplot2} object

Examples

```
library(figpatch)
library(ggplot2)

# Attach the fig image file
image <- system.file("extdata", "fig.png", package = "figpatch", mustWork = TRUE)

# Read in the image as a 'fig'
img <- fig(image)

# add the fig label
fig_lab(
  img,
  lab = "Below you will find a fig!",
  pos = "top",
  size = 20
)
```

---

fig_scale *Scales the Dimensions of Multiple Figs*

Description

Finds the dimensions of the largest figs, and adds a border of the given colour around the other figs, to ensure they are all of the same dimensions and scale properly when displayed on in a patchwork together.

Usage

```
fig_scale(..., border_colour = "transparent")
```

Arguments

...	Multiple figs created with fig().
border_colour	Colour of the border to be added around the smaller figs.

Value

A list of figs which have been resized, which can be input directly into fig_wrap() or patchwork::wrap_plots().

Examples

```
library(figpatch)
fl <- image_path <- system.file("extdata",
  package = "figpatch",
  mustWork = TRUE
) %>%
  list.files(
    pattern = "png",
    full.names = TRUE
  )

# without scaling
fl %>%
  lapply(fig) %>%
  fig_wrap(ncol = 2)

# with scaling
fl %>%
  lapply(fig) %>%
  fig_scale() %>%
  fig_wrap(ncol = 2)
```

---

fig_tag *Add tags and a caption to a fig.*

Description

Add tags and a caption to a fig.

Usage

```
fig_tag(
  plot,
  tag,
  pos = "topleft",
  x_nudge = 0,
  y_nudge = 0,
  colour = NULL,
  alpha = NULL,
  hjust = NULL,
  vjust = NULL,
  fontsize = 12,
  fontface = NULL,
  fontfamily = NULL
)
```

Arguments

plot	Plot from img2plot function.
tag	Label to add to plot.
pos	Position of label (Default 'topleft').
x_nudge	Minor adjustments to the x position in relative plot coordindates (0 being furthest left, 1 being furthest right).
y_nudge	Minor adjustments to the y position in relative plot coordinates (0 being the bottom, 1 being the top).
colour	Colour of label text.
alpha	Alpha of label text.
hjust	hjust of plot label.
vjust	vjust of plot label.
fontsize	Fontsize of label (in points).
fontface	The font face (bolt, italic, ...)
fontfamily	Fontfamily of plot label.

Value

{ggplot2} object

Examples

```
library(figpatch)
library(ggplot2)

# Attach the fig image file
image <- system.file("extdata", "fig.png",
  package = "figpatch", mustWork =
    TRUE
)

# Read in the image as a 'fig'
img <- fig(image)

# Add tags on top of the figs
img1 <- fig_tag(img, "A")
img2 <- fig_tag(img, "B", pos = "topright")

# assemble the patchwork
patchwork::wrap_plots(img1, img2)
```

fig_wrap *Quickly arrange and label multiple figs.*

Description

Quickly arrange and label multiple figs.

Usage

```
fig_wrap(
  figs,
  tag = NULL,
  prefix = NULL,
  suffix = NULL,
  pos = "topleft",
  x_nudge = 0,
  y_nudge = 0,
  nrow = NULL,
  ncol = NULL,
  colour = NULL,
  alpha = NULL,
  hjust = NULL,
  vjust = NULL,
  fontsize = NULL,
  fontfamily = NULL,
  fontface = NULL,
  b_col = NULL,
  b_size = 1,
  b_pos = "offset",
  b_margin = ggplot2::margin(4, 4, 4, 4)
)
```

Arguments

figs	List of figs from `fig()`.
tag	Tags to be applied to figs. Begins with first uppercase or lowercase letter supplied, or number, and continues the sequence. "A" labels them 'A', 'B', etc. "c" labels them 'c', 'd', 'e' etc.
prefix	Prefix for each tag
suffix	Suffix for each tag
pos	Position for label, to be passed to `fig_tag()`.
x_nudge	Minor adjustments to the x position in relative plot coordindates (0 being furthest left, 1 being furthest right).
y_nudge	Minor adjustments to the y position in relative plot coordinates (0 being the bottom, 1 being the top).

nrow	Number of rows in final patchwork.
ncol	Number of cols in final patchwork.
colour	Colour for each tag
alpha	Alpha for each tag
hjust	hjust for each tag
vjust	vjust for each tag
fontsize	Fontsize for each tag
fontfamily	Fontfamily for each tag
fontface	Fontface for each tag
b_col	Colour of individual fig borders.
b_size	Size of individual fig borders (in mm).
b_pos	Either "offset" and expanding outwards from borders of figure, or "inset" and expanding inwards and partially covering the figure.
b_margin	Margins to adjust around the figs. Use ggplot2::margin()

Value

patchwork patch of supplied figs.

Examples

```
library(figpatch)
library(ggplot2)

# Attach the fig image file
image <- system.file("extdata", "fig.png", package = "figpatch", mustWork = TRUE)

# Read in the image as a 'fig'
img <- fig(image)

# multiple figs
figs <- lapply(1:9, function(x) img)

# wrap the figs
fig_wrap(figs)

# Wrap the figs and auto-tag
fig_wrap(figs, tag = "A", suffix = ")")

# Wrap figs, auto-tag and adds border.
fig_wrap(figs, tag = 1, prefix = "(", suffix = ")", b_col = "black")
```

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