

Package ‘figpatch’

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

Version 0.2

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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URL <https://github.com/BradyAJohnston/figpatch>

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

Imports ggplot2, magick, magrittr, methods, patchwork

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`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

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

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 coordinates (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 (bold, 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 coordinates (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 <code>ggplot2::margin()</code>

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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