Package 'ggtibble'

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Title Create Tibbles and Lists of 'ggplot' Figures for Reporting

Version 1.0.2

Description Create tibbles and lists of 'ggplot' figures that can be modified as easily as regular 'ggplot' figures. Typical use cases are for creating reports or web pages where many figures are needed with different data and similar formatting.

License GPL (>= 3)

Encoding UTF-8

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Config/testthat/edition 3

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URL https://humanpred.github.io/ggtibble/, https://github.com/humanpred/ggtibble

BugReports https://github.com/humanpred/ggtibble/issues

Language en-US

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Contents

`extract_glue_expr` *Extract all expressions to be evaluated by* `glue()`

Description

Extract all expressions to be evaluated by `glue()`

Usage

```
extract_glue_expr(...)
```

Arguments

`...`	passed to `glue()`

Value

A character vector of expressions to be evaluated

Examples

```
## Not run:
extract_glue_expr("foo {character(0)} {bar}")

## End(Not run)
```

gglist *Generate a list of ggplots from a list of data.frames*

Description

Generate a list of ggplots from a list of data.frames

Usage

```
gglist(
  data = NULL,
  mapping = ggplot2::aes(),
  ...,
  environment = parent.frame()
)
```

Arguments

data	A list of data.frames (or similar objects)
mapping	Default list of aesthetic mappings to use for plot. If not specified, must be supplied in each layer added to the plot.
...	Other arguments passed on to methods. Not currently used.
environment	**[Deprecated]** Used prior to tidy evaluation.

Value

A list of ggplot2 objects

Examples

```
mydata <-
  list(
    data.frame(x = 1:3, y = 3:1),
    data.frame(x = 4:7, y = 7:4)
  )
gglist(mydata, ggplot2::aes(x = x, y = y)) +
  ggplot2::geom_point()
```

ggsave *Save a plot or list of plots*

Description

Save a plot or list of plots

Usage

```
ggsave(
  filename,
  plot = ggplot2::last_plot(),
  device = NULL,
  path = NULL,
  scale = 1,
  width = NA,
  height = NA,
  units = c("in", "cm", "mm", "px"),
  dpi = 300,
  limitsize = TRUE,
  bg = NULL,
  create.dir = FALSE,
  ...
)

## S3 method for class 'gglist'
ggsave(
  filename,
  plot,
  device = NULL,
  path = NULL,
  scale = 1,
  width = NA,
  height = NA,
  units = c("in", "cm", "mm", "px"),
  dpi = 300,
  limitsize = TRUE,
  bg = NULL,
  create.dir = FALSE,
  ...
)

## S3 method for class 'ggtibble'
ggsave(
  filename,
  plot,
  device = NULL,
```

```
  path = NULL,
  scale = 1,
  width = NA,
  height = NA,
  units = c("in", "cm", "mm", "px"),
  dpi = 300,
  limitsize = TRUE,
  bg = NULL,
  create.dir = FALSE,
  ...
)
```

Arguments

filename	A character string passed to `glue::glue_data()` to generate file names for each row in `plot`.
plot	Plot to save, defaults to last plot displayed.
device	Device to use. Can either be a device function (e.g. png), or one of "eps", "ps", "tex" (pictex), "pdf", "jpeg", "tiff", "png", "bmp", "svg" or "wmf" (windows only). If `NULL` (default), the device is guessed based on the `filename` extension.
path	Path of the directory to save plot to: `path` and `filename` are combined to create the fully qualified file name. Defaults to the working directory.
scale	Multiplicative scaling factor.
width, height	Plot size in units expressed by the `units` argument. If not supplied, uses the size of the current graphics device.
units	One of the following units in which the `width` and `height` arguments are expressed: `"in"`, `"cm"`, `"mm"` or `"px"`.
dpi	Plot resolution. Also accepts a string input: "retina" (320), "print" (300), or "screen" (72). Only applies when converting pixel units, as is typical for raster output types.
limitsize	When `TRUE` (the default), `ggsave()` will not save images larger than 50x50 inches, to prevent the common error of specifying dimensions in pixels.
bg	Background colour. If `NULL`, uses the `plot.background` fill value from the plot theme.
create.dir	Whether to create new directories if a non-existing directory is specified in the `filename` or `path` (`TRUE`) or return an error (`FALSE`, default). If `FALSE` and run in an interactive session, a prompt will appear asking to create a new directory when necessary.
...	Other arguments passed on to the graphics device function, as specified by `device`.

Methods (by class)

- `ggsave(gglist)`: Save the figures in a `gglist` object
- `ggsave(ggtibble)`: Save the figures in a `ggtibble` object

ggtibble *Make a tibble where one column is the data to plot, one is the gglist, and one is the caption*

Description

Make a tibble where one column is the data to plot, one is the gglist, and one is the caption

Usage

```
ggtibble(data, ...)

## S3 method for class 'data.frame'
ggtibble(
  data,
  mapping = ggplot2::aes(),
  ...,
  outercols = group_vars(data),
  labs = list(),
  caption = ""
)
```

Arguments

data	The data.frame to plot
...	Passed to subsequent methods (usually passed to gglist())
mapping	Default list of aesthetic mappings to use for plot. If not specified, must be supplied in each layer added to the plot.
outercols	The columns to have outside the nesting
labs	Labels to add via labs_glue()
caption	The glue specification for creating the caption

Value

A data.frame with a column named "data_plot" with the data to plot, "figure" with the gglist, and "caption" with the captions

A ggtibble object which is a tibble with columns named "figure" which is a gglist object (a list of ggplots), "data_plot" which is the a list of data.frames making up the source data used for each individual plot, "caption" which is the text to use for the plot caption, and all of the outercols used for nesting.

Methods (by class)

- ggtibble(data.frame): The default method for a data.frame or tibble

Examples

```
d_plot <-
  data.frame(
    A = rep(c("foo", "bar"), each = 4),
    B = 1:8,
    C = 11:18,
    Bunit = "mg",
    Cunit = "km"
  )
all_plots <-
  ggtibble(
    d_plot,
    ggplot2::aes(x = B, y = C),
    outercols = c("A", "Bunit", "Cunit"),
    caption = "All the {A}",
    labs = list(x = "B ({Bunit})", y = "C ({Cunit})")
  ) +
  ggplot2::geom_point() +
  ggplot2::geom_line()
knit_print(all_plots)
```

`knit_print.gg` *Print a ggplot (usually within knit_print.gglist)*

Description

Print a ggplot (usually within knit_print.gglist)

Usage

```
## S3 method for class 'gg'
knit_print(
  x,
  ...,
  fig_prefix,
  fig_suffix,
  filename = NULL,
  width = 6,
  height = 4,
  units = "in"
)
```

Arguments

`x`	The gg object (i.e. a ggplot)
`...`	Ignored
`fig_prefix`	Text to `cat()` before the figure is printed

fig_suffix	Any text to add after the figure
filename	A filename saving the plot
width, height	Plot size in units expressed by the units argument. If not supplied, uses the size of the current graphics device.
units	One of the following units in which the width and height arguments are expressed: "in", "cm", "mm" or "px".

Value

The gg object, invisibly

See Also

Other knitters: knit_print.gglist()

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knit_print.gglist *Print a list of plots made by gglist*

Description

The filename argument may be given with an sprintf() format including "%d" to allow automatic numbering of the output filenames. Specifically, the pattern of "%d" with an optional non-negative integer between the "%" and "d" is searched for and if found, then the filename will be generated using that sprintf() format. Note that also means that other requirements for sprintf() must be met; for example, if you want a percent sign ("%") in the filename, it must be doubled so that sprintf returns what is desired.

Usage

```
## S3 method for class 'gglist'
knit_print(x, ..., filename = NULL, fig_suffix = "\n\n")

## S3 method for class 'ggtibble'
knit_print(x, ...)
```

Arguments

x	The gglist object
...	extra arguments to knit_print()
filename	A filename with an optional "%d" sprintf pattern for saving the plots
fig_suffix	Any text to add after the figure

Value

The list, invisibly

Functions

- `knit_print(ggtibble)`: Print the plots in a `ggtibble` object

See Also

Other knitters: `knit_print.gg()`

Examples

```
# Ensure that each figure is within its own float area
mydata <-
  list(
    data.frame(x = 1:3, y = 3:1),
    data.frame(x = 4:7, y = 7:4)
  )
p <- gglist(mydata, ggplot2::aes(x = x, y = y)) +
  ggplot2::geom_point()
knit_print(p, fig_suffix = "\n\n\\FloatBarrier\n\n")
```

---

labs_glue *Generate ggplot2 labels based on data in a ggtibble*

Description

Generate ggplot2 labels based on data in a ggtibble

Usage

```
labs_glue(p, ...)
```

Arguments

`p`	The ggtibble object
`...`	Named arguments to be used as `ggplot2::labs()` labels where the value is a glue specification

Value

`p` with the labels modified

new_gglist *Create a new* gglist *object*

Description

Create a new gglist object

Usage

```
new_gglist(x = list())
```

Arguments

x	A list of ggplot2 objects to convert into a gglist

Value

The list verified to be a gglist and with the gglist class

See Also

Other New ggtibble objects: new_ggtibble()

Examples

```
new_gglist(list(NULL, ggplot2::ggplot(data = data.frame())))
```

new_ggtibble *Create a new* ggtibble *object*

Description

Create a new ggtibble object

Usage

```
new_ggtibble(x)
```

Arguments

x	A data.frame with a column named "figure" and "caption", and where the "figure" column is a ggtibble.

Value

The object with a ggtibble class

See Also

Other New ggtibble objects: `new_gglist()`

Examples

```
new_ggtibble(tibble::tibble(figure = list(ggplot2::ggplot()), caption = ""))
```

`%+%` *Use the* `%+%` *operator from* `ggplot2` *for* `ggtibble` *and* `gglist` *objects*

Description

Use the `%+%` operator from `ggplot2` for `ggtibble` and `gglist` objects

Usage

```
e1 %+% e2
```

Arguments

`e1`	Either a `ggtibble` or `gglist` object or an object that can use the default `ggplot2::%+%` function
`e2`	A plot component (see ?ggplot2::%+%)

Index