

# 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

**RoxygenNote** 7.3.2

**Depends** R (>= 4.3)

**Suggests** rmarkdown, spelling, testthat (>= 3.0.0), withr

**Config/testthat/edition** 3

**Imports** checkmate, dplyr, ggplot2, glue, knitr, purrr, rlang, tibble, tidyr, vctrs

**URL** <https://humanpred.github.io/ggtibble/>,  
<https://github.com/humanpred/ggtibble>

**BugReports** <https://github.com/humanpred/ggtibble/issues>

**Language** en-US

**VignetteBuilder** knitr

**NeedsCompilation** no

**Author** Bill Denney [aut, cre] (ORCID: <<https://orcid.org/0000-0002-5759-428X>>)

**Maintainer** Bill Denney <[wdenney@humanpredictions.com](mailto:wdenney@humanpredictions.com)>

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extract_glue_expr	<i>Extract all expressions to be evaluated by glue()</i>
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### 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)
```

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gglist	<i>Generate a list of ggplots from a list of data.frames</i>
--------	--

---

## 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	<b>[Deprecated]</b> 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 <code>glue::glue_data()</code> 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. <a href="#">png</a> ), 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), <code>ggsave()</code> 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 <code>plot.background</code> 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	<i>Make a tibble where one column is the data to plot, one is the gglist, and one is the caption</i>
----------	--

---

### 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 <code>knit_print()</code>
filename	A filename with an optional "%d" <code>sprintf</code> 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**

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

**Value**

`p` with the labels modified

---

new_gglist	<i>Create a new gglist object</i>
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---

**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	<i>Create a new ggtibble object</i>
--------------	-------------------------------------

---

**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::%+%)

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