Package 'ggvenn'

March 31, 2023

Title Draw Venn Diagram by 'ggplot2'

Version 0.1.10

Author Linlin Yan [aut, cre] (<https://orcid.org/0000-0002-4990-6239>)

Maintainer Linlin Yan <yanlinlin82@gmail.com>

Description An easy-to-use way to draw pretty venn diagram by 'ggplot2'.

Depends dplyr, grid, ggplot2

License MIT + file LICENSE

Encoding UTF-8

RoxygenNote 7.2.3

NeedsCompilation no

Repository CRAN

Date/Publication 2023-03-31 03:50:02 UTC

R topics documented:

`data_frame_to_list` *Utility function for data type conversion.*

Description

Utility function for data type conversion.

Usage

```
data_frame_to_list(x)
```

Arguments

x	A data.frame with logical columns representing sets.

Value

A list of sets.

Examples

```
d <- tibble(name = 1:6,
            A = c(rep(TRUE, 5), FALSE),
            B = rep(c(FALSE, TRUE), each = 3))
print(d)
data_frame_to_list(d)
```

---

geom_venn *Plot venn diagram as a ggplot layer object. It supports only data frame as input.*

Description

Plot venn diagram as a ggplot layer object. It supports only data frame as input.

Usage

```
geom_venn(
  mapping = NULL,
  data = NULL,
  stat = "identity",
  position = "identity",
  ...,
  set_names = NULL,
  show_percentage = TRUE,
  digits = 1,
  label_sep = ",",
  count_column = NULL,
  show_outside = c("auto", "none", "always"),
  auto_scale = FALSE,
  fill_color = c("blue", "yellow", "green", "red"),
  fill_alpha = 0.5,
  stroke_color = "black",
  stroke_alpha = 1,
  stroke_size = 1,
  stroke_linetype = "solid",
  set_name_color = "black",
  set_name_size = 6,
  text_color = "black",
  text_size = 4
)
```

Arguments

mapping	Set of aesthetic mappings created by aes(). If specified and inherit.aes = TRUE (the default), it is combined with the default mapping at the top level of the plot. You must supply mapping if there is no plot mapping.
data	A data.frame or a list as input data.
stat	The statistical transformation to use on the data for this layer, as a string.
position	Position adjustment, either as a string naming the adjustment (e.g. "jitter" to use position_jitter), or the result of a call to a position adjustment function. Use the latter if you need to change the settings of the adjustment.
...	Other arguments passed on to layer(). These are often aesthetics, used to set an aesthetic to a fixed value, like colour = "red" or size = 3. They may also be parameters to the paired geom/stat.
set_names	Set names, use column names if omitted.
show_percentage	Show percentage for each set.
digits	The desired number of digits after the decimal point
label_sep	separator character for displaying elements.
count_column	Specify column for element repeat count.
show_outside	Show outside elements (not belongs to any set).
auto_scale	Allow automatically resizing circles according to element counts.
fill_color	Filling colors in circles.
fill_alpha	Transparency for filling circles.
stroke_color	Stroke color for drawing circles.
stroke_alpha	Transparency for drawing circles.
stroke_size	Stroke size for drawing circles.
stroke_linetype	Line type for drawing circles.
set_name_color	Text color for set names.
set_name_size	Text size for set names.
text_color	Text color for intersect contents.
text_size	Text size for intersect contents.

Value

The ggplot object to print or save to file.

See Also

ggvenn

Examples

```
library(ggvenn)

# use data.frame as input
d <- tibble(value   = c(1,     2,     3,     5,     6,     7,     8,     9),
            `Set 1` = c(TRUE,  FALSE, TRUE,  TRUE,  FALSE, TRUE,  FALSE, TRUE),
            `Set 2` = c(TRUE,  FALSE, FALSE, TRUE,  FALSE, FALSE, FALSE, TRUE),
            `Set 3` = c(TRUE,  TRUE,  FALSE, FALSE, FALSE, FALSE, TRUE,  TRUE),
            `Set 4` = c(FALSE, FALSE, FALSE, FALSE, TRUE,  TRUE,  FALSE, FALSE))

# ggplot gramma
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`)) +
  coord_fixed() +
  theme_void()
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`, C = `Set 3`)) +
  coord_fixed() +
theme_void()
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`, C = `Set 3`, D = `Set 4`)) +
  coord_fixed() +
  theme_void()

# set fill color
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`), fill_color = c("red", "blue")) +
  coord_fixed() +
  theme_void()

# hide percentage
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`), show_percentage = FALSE) +
  coord_fixed() +
  theme_void()

# change precision of percentages
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`), digits = 2) +
  coord_fixed() +
  theme_void()

# show elements instead of count/percentage
ggplot(d) +
  geom_venn(aes(A = `Set 1`, B = `Set 2`, C = `Set 3`, D = `Set 4`, label = value)) +
  coord_fixed() +
  theme_void()
```

---

ggvenn *Plot venn diagram as an independent function. It supports both data frame and list as input.*

Description

Plot venn diagram as an independent function. It supports both data frame and list as input.

Usage

```
ggvenn(
  data,
  columns = NULL,
  show_elements = FALSE,
  show_percentage = TRUE,
  digits = 1,
  fill_color = c("blue", "yellow", "green", "red"),
  fill_alpha = 0.5,
  stroke_color = "black",
  stroke_alpha = 1,
  stroke_size = 1,
  stroke_linetype = "solid",
  set_name_color = "black",
  set_name_size = 6,
  text_color = "black",
  text_size = 4,
  label_sep = ",",
  count_column = NULL,
  show_outside = c("auto", "none", "always"),
  auto_scale = FALSE
)
```

Arguments

data	A data.frame or a list as input data.
columns	A character vector use as index to select columns/elements.
show_elements	Show set elements instead of count/percentage.
show_percentage	Show percentage for each set.
digits	The desired number of digits after the decimal point
fill_color	Filling colors in circles.
fill_alpha	Transparency for filling circles.
stroke_color	Stroke color for drawing circles.
stroke_alpha	Transparency for drawing circles.
stroke_size	Stroke size for drawing circles.
stroke_linetype	Line type for drawing circles.
set_name_color	Text color for set names.
set_name_size	Text size for set names.
text_color	Text color for intersect contents.

text_size	Text size for intersect contents.
label_sep	Separator character for displaying elements.
count_column	Specify column for element repeat count.
show_outside	Show outside elements (not belongs to any set).
auto_scale	Allow automatically resizing circles according to element counts.

Value

The ggplot object to print or save to file.

See Also

geom_venn

Examples

```
library(ggvenn)

# use list as input
a <- list(`Set 1` = c(1, 3, 5, 7),
          `Set 2` = c(1, 5, 9),
          `Set 3` = c(1, 2, 8),
          `Set 4` = c(6, 7))
ggvenn(a, c("Set 1", "Set 2"))
ggvenn(a, c("Set 1", "Set 2", "Set 3"))
ggvenn(a)

# use data.frame as input
d <- tibble(value   = c(1,     2,     3,     5,     6,     7,     8,     9),
            `Set 1` = c(TRUE,  FALSE, TRUE,  TRUE,  FALSE, TRUE,  FALSE, TRUE),
            `Set 2` = c(TRUE,  FALSE, FALSE, TRUE,  FALSE, FALSE, FALSE, TRUE),
            `Set 3` = c(TRUE,  TRUE,  FALSE, FALSE, FALSE, FALSE, TRUE,  TRUE),
            `Set 4` = c(FALSE, FALSE, FALSE, FALSE, TRUE,  TRUE,  FALSE, FALSE))
ggvenn(d, c("Set 1", "Set 2"))
ggvenn(d, c("Set 1", "Set 2", "Set 3"))
ggvenn(d)

# set fill color
ggvenn(d, c("Set 1", "Set 2"), fill_color = c("red", "blue"))

# hide percentage
ggvenn(d, c("Set 1", "Set 2"), show_percentage = FALSE)

# change precision of percentages
ggvenn(d, c("Set 1", "Set 2"), digits = 2)

# show elements instead of count/percentage
ggvenn(a, show_elements = TRUE)
ggvenn(d, show_elements = "value")
```

`list_to_data_frame` *Utility function for data type conversion.*

Description

Utility function for data type conversion.

Usage

```
list_to_data_frame(x)
```

Arguments

`x`	A list of sets.

Value

A data.frame with logical columns representing sets.

Examples

```
a <- list(A = 1:5, B = 4:6)
print(a)
list_to_data_frame(a)
```

Index