

Package ‘ggpie’

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Type Package

Title Pie, Donut and Rose Pie Plots

Version 0.2.5

Maintainer Yabing Song <songyb0519@gmail.com>

Description Create pie, donut and rose pie plot with 'ggplot2'.

URL <https://github.com/showteeth/ggpie>

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ggplot2, ggrepel, magrittr, rlang, utils, stringr

Suggests rmarkdown, cowplot, prettydoc, knitr

VignetteBuilder knitr

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Author Yabing Song [aut, cre]

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ggdonut

*Create donut plot.***Description**

Create donut plot.

Usage

```
ggdonut(
  data,
  group_key = NULL,
  count_type = c("count", "full"),
  fill_color = NULL,
  label_info = c("count", "ratio", "all"),
  label_split = "[[:space:]]+",
  label_len = 40,
  label_color = "black",
  label_type = c("circle", "horizon", "none"),
  label_pos = c("in", "out"),
  label_gap = 0.05,
  label_threshold = NULL,
  label_size = 4,
  border_color = "black",
  border_size = 1,
  r0 = 1,
  r1 = 3,
  donut.label = TRUE,
  donut.label.size = 4,
  donut.label.color = "red",
  nudge_x = 1,
  nudge_y = 1
)
```

Arguments

<code>data</code>	Data frame contains full data or summarized data.
<code>group_key</code>	Column used to summarize the data. Default: NULL.
<code>count_type</code>	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
<code>fill_color</code>	Colors used. Default: NULL (conduct automatic selection).
<code>label_info</code>	Label information type, chosen from count, ratio and all (count and ratio). Default: count.
<code>label_split</code>	Pattern used to split the label, support regular expression. Default: space.
<code>label_len</code>	The length of label text. Used when <code>label_split</code> is NULL. Default: 40.

label_color	Color of the label. Default: black.
label_type	Label style, chosen from circle, horizon and none (no label). Default: circle.
label_pos	Label position, chosen from in and out. Default: in.
label_gap	Gap between label and pie plot, used when label_pos is out.
label_threshold	Threshold of the ratio to determine label position (in/out pie). Default: NULL.
label_size	Size of the label. Default: 4.
border_color	Border color. Default: black.
border_size	Border thickness. Default: 1.
r0	The radius of inner blank circle. Default: 1.
r1	The radius of outer circle. Default: 3.
donut.label	Logical value, whether to show total number in the center of the plot. Default: TRUE.
donut.label.size	The label size of center label. Default: 4.
donut.label.color	The color of center label. Default: red.
nudge_x	Parameter of geom_text_repel . Default: 1.
nudge_y	Parameter of geom_text_repel . Default: 1.

Value

A ggplot2 object.

Examples

```
library(ggpie)
library(ggplot2)
data(diamonds)
# circle label and out of pie
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "circle",
  label_size = 4, label_pos = "out"
)
# circle label and in pie plot, with no split
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "circle", label_split = NULL,
  label_size = 4, label_pos = "in"
)
# horizon label and in pie plot, with no split
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in"
)
```

```

# horizon label and in pie plot
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon",
  label_size = 4, label_pos = "in"
)
# horizon label and out of pie plot, with no split
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "out"
)
# horizon label and out of pie plot
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon",
  label_size = 4, label_pos = "out"
)
# with label threshold
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in", label_threshold = 10
)
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon",
  label_size = 4, label_pos = "in", label_threshold = 10
)

```

ggnestedpie

Create nested pie plot.

Description

Create nested pie plot.

Usage

```

ggnestedpie(
  data,
  group_key = NULL,
  count_type = c("count", "full"),
  r0 = 0.5,
  r1 = 1.5,
  r2 = 2.5,
  inner_thick = 1,
  outer_thick = 1,
  inner_fill_color = NULL,

```

```

inner_label = TRUE,
inner_label_info = c("count", "ratio", "all"),
inner_label_color = "black",
inner_label_split = "[[:space:]]+",
inner_label_len = 40,
inner_label_threshold = NULL,
inner_label_size = 4,
outer_fill_color = NULL,
outer_label_type = c("circle", "horizon", "none"),
outer_label_pos = c("in", "out"),
outer_label_info = c("count", "ratio", "all"),
outer_label_split = "[[:space:]]+",
outer_label_len = 40,
outer_label_color = "black",
outer_label_gap = 0.05,
outer_label_threshold = NULL,
outer_label_size = 4,
border_color = "black",
border_size = 1,
outer_nudge_x = 1,
outer_nudge_y = 1
)

```

Arguments

<code>data</code>	Data frame contains full data or summarized data.
<code>group_key</code>	Column used to summarize the data. Default: NULL.
<code>count_type</code>	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
<code>r0</code>	The radius of inner blank circle. Default: 0.5 (donut plot). When set to 0, inner plot is pie.
<code>r1</code>	The radius of inner pie plot. Default: 1.5.
<code>r2</code>	The radius of outer pie plot. Default: 2.5.
<code>inner_thick</code>	The width of inner pie plot. Default: 1.
<code>outer_thick</code>	The width of outer pie plot. Default: 1.
<code>inner_fill_color</code>	Colors used for inner pie plot. Default: NULL (conduct automatic selection).
<code>inner_label</code>	Logical value, whether to show label on inner pie label. Default: TRUE.
<code>inner_label_info</code>	Label information type of inner pie plot, chosen from count, ratio and all (count and ratio). Default: count.
<code>inner_label_color</code>	Color of the label on inner pie. Default: black.
<code>inner_label_split</code>	Pattern used to split the label of inner pie, support regular expression. Default: space.

<code>inner_label_len</code>	Label text length of inner pie. Used when <code>inner_label_split</code> is NULL. Default: 40.
<code>inner_label_threshold</code>	Threshold of the ratio to determine label or not on inner pie. Default: NULL.
<code>inner_label_size</code>	Size of the label on inner pie. Default: 4.
<code>outer_fill_color</code>	Colors used for outer pie plot. Default: NULL (conduct automatic selection).
<code>outer_label_type</code>	Label style of outer pie plot, chosen from circle, horizon and none (no label). Default: circle.
<code>outer_label_pos</code>	Label position of outer pie, chosen from in and out. Default: in.
<code>outer_label_info</code>	Label information type of outer pie plot, chosen from count, ratio and all (count and ratio). Default: count.
<code>outer_label_split</code>	Pattern used to split the label of outer pie, support regular expression. Default: space.
<code>outer_label_len</code>	Label text length of outer pie. Used when <code>outer_label_split</code> is NULL. Default: 40.
<code>outer_label_color</code>	Color of the label on outer pie. Default: black.
<code>outer_label_gap</code>	Gap between label and outer pie plot, used when <code>outer_label_pos</code> is out.
<code>outer_label_threshold</code>	Threshold of the ratio to determine label position (in/out pie). Default: NULL.
<code>outer_label_size</code>	Size of the label on outer pie. Default: 4.
<code>border_color</code>	Border color. Default: black.
<code>border_size</code>	Border thickness. Default: 1.
<code>outer_nudge_x</code>	Parameter of geom_text_repel . Default: 1.
<code>outer_nudge_y</code>	Parameter of geom_text_repel . Default: 1.

Value

A ggplot2 object.

Examples

```
library(ggpie)
library(ggplot2)
data(diamonds)
# inner circle label, outer circle label and in pie plot
```

```

ggnestedpie(
  data = diamonds, group_key = c("cut", "color"), count_type = "full",
  inner_label_info = "all", inner_label_split = NULL,
  outer_label_type = "circle", outer_label_pos = "in", outer_label_info = "all"
)
# inner circle label, outer circle label and in pie plot, remove fraction below 1 of inner pie
ggnestedpie(
  data = diamonds, group_key = c("cut", "color"), count_type = "full",
  inner_label_info = "all", inner_label_split = NULL,
  inner_label_threshold = 1, inner_label_size = 3,
  outer_label_type = "circle", outer_label_pos = "in", outer_label_info = "all"
)
# inner circle label, outer circle label and out of pie plot
ggnestedpie(
  data = diamonds, group_key = c("cut", "color"), count_type = "full",
  inner_label_info = "all", inner_label_split = NULL,
  outer_label_type = "circle", outer_label_pos = "out", outer_label_info = "all"
)
# inner circle label and no split, outer horizon label and out of pie plot,
# remove fraction below 1 of inner pie
ggnestedpie(
  data = diamonds, group_key = c("cut", "color"), count_type = "full",
  inner_label_info = "all", inner_label_split = NULL,
  inner_label_threshold = 1, inner_label_size = 3,
  outer_label_type = "horizon", outer_label_pos = "out", outer_label_info = "all"
)
# inner circle label and no split, outer horizon label and in pie plot,
# remove fraction below 1 of inner pie,
# adjust fraction below 10 to out of pie of outer pie plot.
ggnestedpie(
  data = diamonds, group_key = c("cut", "color"), count_type = "full",
  inner_label_info = "all", inner_label_split = NULL,
  inner_label_threshold = 1, inner_label_size = 3,
  outer_label_type = "horizon", outer_label_pos = "in",
  outer_label_info = "all", outer_label_threshold = 10
)
# create blank between inner and outer pie
ggnestedpie(
  data = diamonds, group_key = c("cut", "color"), count_type = "full", r0 = 0.5, r1 = 1.5, r2 = 2.6,
  inner_label_info = "all", inner_label_split = NULL,
  inner_label_threshold = 1, inner_label_size = 3,
  outer_label_type = "horizon", outer_label_pos = "in",
  outer_label_info = "all", outer_label_threshold = 10
)

```

ggpie

Create Pie plot.

Description

Create Pie plot.

Usage

```
ggpie(
  data,
  group_key = NULL,
  count_type = c("count", "full"),
  fill_color = NULL,
  label_info = c("count", "ratio", "all"),
  label_split = "[[:space:]]+",
  label_len = 40,
  label_color = "black",
  label_type = c("circle", "horizon", "none"),
  label_pos = c("in", "out"),
  label_gap = 0.05,
  label_threshold = NULL,
  label_size = 4,
  border_color = "black",
  border_size = 1,
  nudge_x = 1,
  nudge_y = 1
)
```

Arguments

<code>data</code>	Data frame contains full data or summarized data.
<code>group_key</code>	Column used to summarize the data. Default: NULL.
<code>count_type</code>	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
<code>fill_color</code>	Colors used. Default: NULL (conduct automatic selection).
<code>label_info</code>	Label information type, chosen from count, ratio and all (count and ratio). Default: count.
<code>label_split</code>	Pattern used to split the label, support regular expression. Default: space.
<code>label_len</code>	The length of label text. Used when <code>label_split</code> is NULL. Default: 40.
<code>label_color</code>	Color of the label. Default: black.
<code>label_type</code>	Label style, chosen from circle, horizon and none (no label). Default: circle.
<code>label_pos</code>	Label position, chosen from in and out. Default: in.
<code>label_gap</code>	Gap between label and pie plot, used when <code>label_pos</code> is out.
<code>label_threshold</code>	Threshold of the ratio to determine label position (in/out pie). Default: NULL.
<code>label_size</code>	Size of the label. Default: 4.
<code>border_color</code>	Border color. Default: black.
<code>border_size</code>	Border thickness. Default: 1.
<code>nudge_x</code>	Parameter of geom_text_repel . Default: 1.
<code>nudge_y</code>	Parameter of geom_text_repel . Default: 1.

Value

A ggplot2 object.

Examples

```
library(ggpie)
library(ggplot2)
data(diamonds)
# with no label
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "none"
)
# circle label and out of pie
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "circle",
  label_size = 4, label_pos = "out"
)
# circle label and in pie plot, with no split
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "circle", label_split = NULL,
  label_size = 4, label_pos = "in"
)
# horizon label and in pie plot, with no split
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in"
)
# horizon label and in pie plot, split with space
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon",
  label_size = 4, label_pos = "in"
)
# horizon label and out pie plot, with no split
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "out"
)
# with label threshold
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in", label_threshold = 10
)
```

ggpie3D

*Create 3D pie plot.***Description**

Create 3D pie plot.

Usage

```
ggpie3D(
  data,
  group_key = NULL,
  count_type = c("count", "full"),
  fill_color = NULL,
  start_degrees = 0,
  tilt_degrees = -20,
  height = 0.1,
  darken = 0.15,
  camera_eye = c(0, 3, 5),
  camera_look_at = c(0, 0, 0),
  show_label = TRUE,
  label_info = c("count", "ratio", "all"),
  label_split = "[[:space:]]+",
  label_len = 40,
  label_size = 4
)
```

Arguments

<code>data</code>	Data frame contains full data or summarized data.
<code>group_key</code>	Column used to summarize the data. Default: NULL.
<code>count_type</code>	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
<code>fill_color</code>	Colors used. Default: NULL (conduct automatic selection).
<code>start_degrees</code>	starting angle for first pie slice (in degrees). Default: 0.
<code>tilt_degrees</code>	angle by which to tilt the pie towards the camera (in degrees). Default: 0.
<code>height</code>	height of the pie. Default: 0.1.
<code>darken</code>	Shadow degree. Default: 0.15.
<code>camera_eye</code>	location of camera eye. Default: c(0, 3, 5).
<code>camera_look_at</code>	at what point is the camera looking. Default: c(0, 0, 0).
<code>show_label</code>	Logical value, whether to show label or not. Default: TRUE.
<code>label_info</code>	Label information type, chosen from count, ratio and all (count and ratio). Default: count.

label_split	Pattern used to split the label, support regular expression. Default: space.
label_len	The length of label text. Used when label_split is NULL. Default: 40.
label_size	Size of the label. Default: 4.

Value

A ggplot2 object.

Examples

```
library(ggpie)
library(ggplot2)
data(diamonds)
ggpie3D(data = diamonds, group_key = "cut", count_type = "full", tilt_degrees = -10)
ggpie3D(
  data = mtcars, group_key = "cyl", count_type = "full",
  tilt_degrees = -10, start_degrees = 0
)
data <- data.frame(group = letters[1:5], count = c(1, 2, 3, 1, 1), stringsAsFactors = FALSE)
ggpie3D(data = data, start_degrees = 0, label_split = NULL)
```

ggrosepie

Create rose pie plot.

Description

Create rose pie plot.

Usage

```
ggrosepie(
  data,
  group_key = NULL,
  count_type = c("count", "full"),
  fill_color = NULL,
  label_info = c("count", "ratio", "all"),
  label_split = NULL,
  label_len = 40,
  label_color = "black",
  sort = TRUE,
  show_tick = TRUE,
  tick_break = NULL,
  show_label = TRUE,
  label_sep = "|",
  label_gap = 0.05,
  label_size = 4,
  donut_frac = 0.1,
  donut_label = TRUE,
```

```

    donut_label_size = 4,
    donut_label_color = "red",
    border_color = "black",
    border_size = 1
  )

```

Arguments

<code>data</code>	Data frame contains full data or summarized data.
<code>group_key</code>	Column used to summarize the data, one or two are acceptable. Default: NULL.
<code>count_type</code>	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
<code>fill_color</code>	Colors used. When length of <code>group_key</code> is two, color the subgroup, otherwise the main group. Default: NULL (conduct automatic selection).
<code>label_info</code>	Label information type, chosen from count, ratio and all (count and ratio). Default: count.
<code>label_split</code>	Pattern used to split the label, support regular expression. Default: NULL.
<code>label_len</code>	The length of label text. Used when <code>label_split</code> is NULL. Default: 40.
<code>label_color</code>	Color of the label. When length of <code>group_key</code> is two, this should be set to one color. Default: black.
<code>sort</code>	Logical value, whether to order the plot by counts. Default: TRUE.
<code>show_tick</code>	Logical value, whether to show the tick. Default: TRUE.
<code>tick_break</code>	The break of tick. Default: NULL (conduct automatic selection).
<code>show_label</code>	Logical value, whether to show the label. Default: TRUE.
<code>label_sep</code>	The separator between group and count info. Default: .
<code>label_gap</code>	The gap between label and plot. Default: 0.05 (count + 0.05*count).
<code>label_size</code>	The size of label. Default: 4.
<code>donut_frac</code>	The fraction of donut. Default: 0.1 (0.1*max(count)).
<code>donut_label</code>	Logical value, whether to show total number in the center of the plot. Default: TRUE.
<code>donut_label_size</code>	The label size of center label. Default: 4.
<code>donut_label_color</code>	The color of center label. Default: red.
<code>border_color</code>	Border color. Default: black.
<code>border_size</code>	Border thickness. Default: 1.

Value

A `ggplot2` object.

Examples

```
library(ggpie)
library(ggplot2)
data(diamonds)
# do not show tick
ggrosepie(diamonds,
  group_key = "color", count_type = "full", label_info = "all",
  show_tick = FALSE, donut_frac = 0.3, donut_label_size = 3
)
# show tick and with automatic selection
ggrosepie(diamonds,
  group_key = "color", count_type = "full", label_info = "all",
  donut_frac = 0.3, donut_label_size = 3
)
# show tick and with specific break
ggrosepie(diamonds,
  group_key = "color", count_type = "full", label_info = "all",
  tick_break = c(3000, 5000, 7000, 11000), donut_frac = 0.3, donut_label_size = 3
)
# two group variable, and do not show tick
ggrosepie(diamonds,
  group_key = c("color", "clarity"),
  count_type = "full", label_info = "all",
  show_tick = FALSE, donut_frac = 0.3, donut_label_size = 3
)
# two group variable, show tick and with automatic selection
ggrosepie(diamonds,
  group_key = c("color", "clarity"),
  count_type = "full", label_info = "all",
  donut_frac = 0.3, donut_label_size = 3
)
# two group variable, show tick and with specific break
ggrosepie(diamonds,
  group_key = c("color", "clarity"),
  count_type = "full", label_info = "all",
  tick_break = c(3000, 5000, 7000, 11000), donut_frac = 0.3, donut_label_size = 3
)
```

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