Package 'ggpie'

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Type Package

Title Pie, Donut and Rose Pie Plots

Version 0.2.2

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

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

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Encoding UTF-8

RoxygenNote 7.1.1

Imports dplyr, grDevices, RColorBrewer, scales, tibble, ggnewscale, ggplot2, ggrepel, magrittr, rlang, utils, cowplot

Suggests rmarkdown, knitr

VignetteBuilder knitr

NeedsCompilation no

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R topics documented:

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_color = "black",
  label_type = c("circle", "horizon", "none"),
  label_pos = c("in", "out"),
  label_gap = 0.05,
  labal_threshold = NULL,
  label_size = 4,
  border_color = "black",
  r0 = 1,
  r1 = 3,
  donut.label = TRUE,
  donut.label.size = 4,
  donut.label.color = "red"
)
```

Arguments

data	Data frame contains full data or summarized data.
group_key	Column used to summarize the data. Default: NULL.
count_type	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
fill_color	Colors used. Default: NULL (conduct automatic selection).
label_info	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_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.

labal_threshold
: Threashold 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.

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.

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 threashold
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in", labal_threshold = 10
)
ggdonut(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon",
  label_size = 4, label_pos = "in", labal_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_labal_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_color = "black",
  outer_label_gap = 0.05,
  outer_labal_threshold = NULL,
  outer_label_size = 4,
  border_color = "black"
)
```

Arguments

data	Data frame contains full data or summarized data.
group_key	Column used to summarize the data. Default: NULL.
count_type	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
r0	The radius of inner blank circle. Default: 0.5 (donut plot). When set to 0, inner plot is pie.
r1	The radius of inner pie plot. Default: 1.5.
r2	The radius of outer pie plot. Default: 2.5.
inner_thick	The width of inner pie plot. Default: 1.
outer_thick	The width of outer pie plot. Default: 1.
inner_fill_color	Colors used for inner pie plot. Default: NULL (conduct automatic selection).
inner_label	Logical value, whether to show label on inner pie label. Default: TRUE.
inner_label_info	Label information type of inner pie plot, chosen from count, ratio and all (count and ratio). Default: count.
inner_label_color	Color of the label on inner pie. Default: black.
inner_label_split	Pattern used to split the label of inner pie, support regular expression. Default: space.
inner_labal_threshold	Threashold of the ratio to determine label or not on inner pie. Default: NULL.
inner_label_size	Size of the label on inner pie. Default: 4.
outer_fill_color	Colors used for outer pie plot. Default: NULL (conduct automatic selection).
outer_label_type	Label style of outer pie plot, chosen from circle, horizon and none (no label). Default: circle.
outer_label_pos	Label position of outer pie, chosen from in and out. Default: in.

`outer_label_info`
: Label information type of outer pie plot, chosen from count, ratio and all (count and ratio). Default: count.

`outer_label_split`
: Pattern used to split the label of outer pie, support regular expression. Default: space.

`outer_label_color`
: Color of the label on outer pie. Default: black.

`outer_label_gap`
: Gap between label and outer pie plot, used when `outer_label_pos` is out.

`outer_labal_threshold`
: Threashold of the ratio to determine label position (in/out pie). Default: NULL.

`outer_label_size`
: Size of the label on outer pie. Default: 4.

`border_color`
: Border color. Default: black.

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_labal_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_labal_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_labal_threshold = 1, inner_label_size = 3,
  outer_label_type = "horizon", outer_label_pos = "in",
  outer_label_info = "all", outer_labal_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_labal_threshold = 1, inner_label_size = 3,
  outer_label_type = "horizon", outer_label_pos = "in",
  outer_label_info = "all", outer_labal_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_color = "black",
  label_type = c("circle", "horizon", "none"),
  label_pos = c("in", "out"),
  label_gap = 0.05,
  labal_threshold = NULL,
  label_size = 4,
  border_color = "black"
)
```

Arguments

data	Data frame contains full data or summarized data.
group_key	Column used to summarize the data. Default: NULL.
count_type	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
fill_color	Colors used. Default: NULL (conduct automatic selection).
label_info	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_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.
labal_threshold	Threashold 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.

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 threashold
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in", labal_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_size = 4
)
```

Arguments

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

Arguments

data	Data frame contains full data or summarized data.
group_key	Column used to summarize the data, one or two are acceptable. Default: NULL.
count_type	Data frame type, chosen from "count" and "full". "count" means summarized data and "full" means full data. Default: count.
fill_color	Colors used. When length of group_key is two, color the subgroup, otherwise the main group. Default: NULL (conduct automatic selection).
label_info	Label information type, chosen from count, ratio and all (count and ratio). Default: count.
label_color	Color of the label. When length of group_key is two, this should be set to one color. Default: black.
sort	Logical value, whether to order the plot by counts. Default: TRUE.
show_tick	Logical value, whether to show the tick. Default: TRUE.
tick_break	The break of tick. Default: NULL (conduct automatic selection).
show_label	Logical value, whether to show the label. Default: TRUE.
label_sep	The separator between group and count info. Default: |.
label_gap	The gap between label and plot. Default: 0.05 (count + 0.05*count).
label_size	The size of label. Default: 4.
donut_frac	The fraction of donut. Default: 0.1 (0.1*max(count)).
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.

border_color
: Border color. Default: black.

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
)
```

Index