Package ‘ggpie’

November 16, 2022

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
License MIT + file LICENSE
Encoding UTF-8
RoxygenNote 7.1.1
Imports dplyr, grDevices, RColorBrewer, scales, tibble, ggnewscale, ggplot2, ggrepel, magrittr, rlang, utils, stringr
Suggests rmarkdown, cowplot, prettydoc, knitr
VignetteBuilder knitr
NeedsCompilation no
Author Yabing Song [aut, cre]
Repository CRAN
Date/Publication 2022-11-16 07:40:06 UTC

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ggdonut  

Create donut plot.

Description

Create donut plot.

Usage

```r
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

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_len  The length of label text. Used when label_split is NULL. Default: 40.
### ggdonut

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

#### Value

A ggplot2 object.

#### Examples

```r
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

# horizon label and out of pie plot

# with label threshold

---

ggnestedpie

Create nested pie plot.

**Description**

Create nested pie plot.

**Usage**

```r
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,
            label_split = NULL,
            label_info = "all", label_type = "horizon",
            label_size = 4, label_pos = "in", label_threshold = 10)
```
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

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_label_len
Label text length of inner pie. Used when inner_label_split is NULL. Default: 40.

inner_label_threshold
Threshold 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_len
Label text length of outer pie. Used when outer_label_split is NULL. Default: 40.

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_label_threshold
Threshold 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.

border_size
Border thickness. Default: 1.

outer_nudge_x

outer_nudge_y

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

```r
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

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_len: The length of label text. Used when label_split 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.
border_color: Border color. Default: black.
**ggpie**

Value

A ggplot2 object.

Examples

```r
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
# horizon 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, split with space
# horizon label and out pie plot, with no split
# with label threshold
```

```r
ggpie(
  data = diamonds, group_key = "cut", count_type = "full",
  label_info = "all", label_type = "horizon", label_split = NULL,
  label_size = 4, label_pos = "in"
)
```
ggpie3D

Create 3D pie plot.

Description

Create 3D pie plot.

Usage

```r
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

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.
ggrosepie

`ggrosepie` is an R package that allows you to create rose pie plots. Here's a breakdown of some of its key features:

- **label_split**: This parameter is used to split the label, supporting regular expressions. The default is a space.
- **label_len**: It specifies the length of the label text. If `label_split` is `NULL`, it defaults to 40.
- **label_size**: This parameter sets the size of the label. The default size is 4.

### Value

A ggplot2 object.

### Examples

```r
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)
```

### Description

Create rose pie plots.

### Usage

```r
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,
```

The `ggrosepie` function in the `ggpie` package allows you to create rose pie plots. It provides various parameters to customize the appearance of the plot, including options for label splitting, length, and size.
donut_label_size = 4,
donut_label_color = "red",
border_color = "black",
border_size = 1
)

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_split Pattern used to split the label, support regular expression. Default: NULL.
label_len The length of label text. Used when label_split is NULL. Default: 40.
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: l.
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.
border_size Border thickness. Default: 1.

Value
A ggplot2 object.
Examples

```r
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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