

Package ‘scatterpie’

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Title Scatter Pie Plot

Version 0.2.6

Description Creates scatterpie plots, especially useful for plotting pies on a map.

Depends R (>= 4.1.0), ggplot2

Imports ggforce, rlang, ggfun, stats, tidyr, dplyr, utils, yulab.utils
(>= 0.1.6)

Suggests knitr, rmarkdown, prettydoc, maps, scales, cli

VignetteBuilder knitr

License Artistic-2.0

Encoding UTF-8

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NeedsCompilation no

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| geom_scatterpie | <i>geom_scatterpie</i> |
|-----------------|------------------------|

Description

scatter pie plot

Usage

```
geom_scatterpie(  
  mapping = NULL,  
  data = NULL,  
  cols,  
  pie_scale = 1,  
  sorted_by_radius = FALSE,  
  legend_name = "type",  
  long_format = FALSE,  
  label_radius = NULL,  
  label_show_ratio = TRUE,  
  label_threshold = 0,  
  donut_radius = NULL,  
  bg_circle_radius = NULL,  
  ...  
)
```

```
geom_scatterpie2(  
  mapping = NULL,  
  data,  
  cols,  
  pie_scale = 1,  
  sorted_by_radius = FALSE,  
  legend_name = "type",  
  long_format = FALSE,  
  label_radius = NULL,  
  label_show_ratio = TRUE,  
  label_threshold = 0,  
  donut_radius = NULL,  
  bg_circle_radius = NULL,  
  ...  
)
```

Arguments

| | |
|---------|-------------------|
| mapping | aes mapping |
| data | data |
| cols | cols the pie data |

| | |
|------------------|--|
| pie_scale | amount to scale the pie size if there is no radius mapping exists |
| sorted_by_radius | whether plotting large pie first |
| legend_name | name of fill legend |
| long_format | logical whether use long format of input data |
| label_radius | numeric the radius of label position (relative the radius of pie), default is NULL, when it is provided, the ratio or value label will be displayed. |
| label_show_ratio | logical only work when label_radius is not NULL, default is TRUE, meaning the ratio of label will be displayed. |
| label_threshold | numeric the threshold is to control display the label, the ratio of slice pie smaller than the threshold will not be displayed. default is 0. |
| donut_radius | numeric the radius of donut chart (relative the radius of circle), default is NULL. it should be between 0 and 1, if it is provided, the donut chart will be displayed instead of pie chart. |
| bg_circle_radius | numeric the radius of background circle, default is FALSE, we suggest setting it to between 1 and 1.5 . |
| ... | additional parameters |

Value

layer

Author(s)

Guangchuang Yu

Examples

```
library(ggplot2)
d <- data.frame(x=rnorm(5), y=rnorm(5))
d$A <- abs(rnorm(5, sd=1))
d$B <- abs(rnorm(5, sd=2))
d$C <- abs(rnorm(5, sd=3))

ggplot() +
  geom_scatterpie(
    aes(x=x, y=y), data=d, cols=c("A", "B", "C")
  ) +
  coord_fixed()

ggplot() +
  geom_scatterpie(
    aes(x=x, y=y), data = d, cols=c("A", "B", "C"),
    label_radius=1.05
  ) +
```

```

coord_fixed()

d <- tidyr::gather(d, key="letters", value="value", -x:-y)
ggplot() + geom_scatterpie(aes(x=x, y=y), data=d, cols="letters", long_format=TRUE) + coord_fixed()
p1 <- ggplot() +
  geom_scatterpie(
    mapping = aes(x=x, y=y), data=d, cols="letters",
    long_format=TRUE,
    donut_radius=.5
  ) +
  coord_fixed()
p1
p2 <- ggplot() +
  geom_scatterpie(
    mapping = aes(x=x, y=y), data=d, cols="letters",
    long_format=TRUE,
    donut_radius = .5,
    bg_circle_radius = 1.2
  ) +
  coord_fixed()
p2
d |> dplyr::select(c(x, y)) |> dplyr::distinct() |> dplyr::mutate(Cell=c('A', 'A', 'B', 'C', 'B')) -> d2
d |> dplyr::left_join(d2) -> d3
d3$r_size <- c(2, 3, 4, 5, 6) * .01

head(d3)
p3 <- ggplot() +
  geom_scatterpie(data = d3, mapping = aes(x=x, y=y, r = r_size, color=Cell), cols="letters",
    long_format=TRUE, donut_radius=.5, color = NA, linewidth=2,
    bg_circle_radius=1.2) + coord_fixed()
p3
p4 <- ggplot() +
  geom_scatterpie(data = d3,
    mapping = aes(x, y = y, r = r_size),
    cols = 'letters',
    long_format = TRUE,
    label_radius = 1.1,
    label_show_ratio = FALSE,
    label_threshold = 0.06,
    fontsize = 3
  ) +
  coord_fixed()
p4

```

Description

legend of scatterpie

Usage

```
geom_scatterpie_legend(
  radius,
  x,
  y,
  n = 5,
  breaks = NULL,
  labeller,
  label_position = "right",
  ...
)
```

Arguments

| | |
|----------------|--|
| radius | radius vector |
| x | x position |
| y | y position |
| n | number of circle |
| breaks | A character vector of breaks, default is NULL. |
| labeller | function to label radius |
| label_position | a character string indicating the position of labels, "right" (default) or "left" or any abbreviation of these |
| ... | other text arguments passed on to ggplot2::layer() |

Value

layer

Author(s)

Guangchuang Yu

recenter

recenter

Description

re-center map data

Usage

```
recenter(mapdata, center, longitude_column = "long")
```

Arguments

mapdata map data, should be a data.frame
center center
longitude_column longitude column

Value

updated map data

Author(s)

ygc

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