

# Package ‘scatterpie’

June 21, 2025

**Title** Scatter Pie Plot

**Version** 0.2.5

**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

**RoxygenNote** 7.3.2

**NeedsCompilation** no

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**Repository** CRAN

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

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## 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 <a href="#">ggplot2::layer()</a>                                             |

**Value**

layer

**Author(s)**

Guangchuang Yu

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recenter

*recenter*


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**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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