Package ‘ggVennDiagram’

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Type Package

Title A 'ggplot2' Implement of Venn Diagram

Version 0.3

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Description Easy-to-use functions to generate 2-4 sets Venn plot in publication quality. 'ggVennDiagram' is the first software that can automatically fill different colors to each part of a Venn diagram.

Depends R (>= 3.5.0)

Imports VennDiagram, sf, ggplot2, dplyr

URL https://github.com/gaospecial/ggVennDiagram

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

Suggests testthat (>= 2.1.0)

NeedsCompilation no

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circle *generating a circle*

Description

generating a circle

Usage

```
circle(x, y, r, n = 1000)
```

Arguments

`x, y`	center of circle
`r`	radius of circle
`n`	points (resolution)

Value

a data.frame representing circle position

draw_2d_venn *draw 2d, 3d, and 4d venn diagram*

Description

draw 2d, 3d, and 4d venn diagram

Usage

```
draw_2d_venn(x, n.sides, category.names, label, ...)

draw_3d_venn(x, n.sides, category.names, label, ...)

draw_4d_venn(x, n.sides, category.names, label, ...)
```

Arguments

`x`	a list of items
`n.sides`	resolution
`category.names`	default is names(x)
`label`	c("both","percent","count")
`...`	passing to geom_polygon, enabling modification of polygon styles

`ggVennDiagram` *ggVennDiagram*

Description

ggVennDiagram

Usage

```
ggVennDiagram(x, category.names = names(x), n.sides = 3000,
  label = "both", lty = 1, color = "grey", ...)
```

Arguments

`x`	list of items
`category.names`	default is names(x)
`n.sides`	set how many points been generated for one ellipse, the more points, the better resolution.
`label`	select one from c("count","percent","both")
`lty`	line type of polygons
`color`	line color of polygons
`...`	Other arguments passed on to the polygon layer.

Value

A ggplot object

Examples

```
x <- list(A=1:5,B=2:7,C=3:6,D=4:9)
ggVennDiagram(x)  # 4d venn
ggVennDiagram(x[1:3])  # 3d venn
ggVennDiagram(x[1:2])  # 2d venn
```

`multi` *Performs set union/intersection/diff on more than two vectors.*

Description

Performs set union/intersection/diff on more than two vectors.

Usage

```
multi_union(..., l = NULL)

multi_intersect(..., l = NULL)

multi_setdiff(..., l = NULL)
```

Arguments

`...`	at least three items are needed if use this parameter
`l`	a list of vectors

`multi_st_fun` *Perform geometric set intersection, difference, and union with more than two simple feature geometry collections*

Description

Perform geometric set intersection, difference, and union with more than two simple feature geometry collections

Usage

```
st_multi_intersection(..., l = NULL)

st_multi_difference(..., l = NULL)

st_multi_union(..., l = NULL)
```

Arguments

`...`	at least three items are needed if use this parameter
`l`	a list of polygons

Value

intersection/union/diff of items

plot_venn *plot codes*

Description

plot codes

Usage

```
plot_venn(region_data, category, counts, label, ...)
```

Arguments

`region_data`	a list of two dataframes, which were used to plot polygon and label latter.
`category`	name of Set
`counts`	counts of items for every combinations
`label`	select one from c("count","percent","both")
`...`	Other arguments passed on to the polygon layer.

Value

ggplot object

two_dimension_circle_regions *coordinations of polygon regions/centers for venn diagram*

Description

coordinations of polygon regions/centers for venn diagram

Usage

```
two_dimension_circle_regions(n.sides = 1000)

three_dimension_circle_regions(n.sides = 1000)

four_dimension_ellipse_regions(n.sides)
```

Arguments

`n.sides`	resolution

two_dimension_region_values *calculating intersection values of venn*

Description

calculating intersection values of venn

Usage

```
two_dimension_region_values(x)

three_dimension_region_values(x)

four_dimension_region_values(x)
```

Arguments

x	a list of vector items.

Value

data.frame

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