Package 'tidygate'

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Type Package

Title Add Gate Information to Your Tibble

Version 0.3.2

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Description It interactively or programmatically label points within custom gates on two dimensions. The information is added to your tibble. It is based on the package 'gatepoints' from Wajid Jawaid. The benefits are (i) in interactive mode you can draw your gates on extensive 'ggplot'-like scatter plots;
(ii) you can draw multiple gates; and (iii) you can save your gates and apply the programmatically.

License GPL-3

Depends R (>= 3.6.0)

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

Imports methods,
lme4,
stats,
utils,
graphics,
lifecycle,
gatepoints,
scales,
magrittr,
tibble,
dplyr,
tidyselect,
purrr,
rlang,
tidyr,
viridis,
grDevices,
RColorBrewer,
stringr

RdMacros lifecycle

Suggests testthat,
markdown,
knitr

VignetteBuilder knitr

Biarch true

biocViews AssayDomain, Infrastructure

R topics documented:

`gate_chr` *Label points within a scatter plot drawing a gate*

Description

gate() takes as input a ‘tbl‘ formatted as | <DIMENSION 1> | <DIMENSION 2> | <...> | and calculates the rotated dimensional space of the feature value.

Usage

```
gate_chr(
  .dim1,
  .dim2,
  .color = NULL,
  .shape = NULL,
  .size = NULL,
  opacity = 1,
  how_many_gates = 1,
  .group_by = NULL,
  gate_list = NULL,
  ...
)

gate_int(
  .dim1,
  .dim2,
  .color = NULL,
  .shape = NULL,
  .size = NULL,
  opacity = 1,
  how_many_gates = 1,
  .group_by = NULL,
  gate_list = NULL,
  ...
)
```

Arguments

.dim1	A column symbol. The x dimension
.dim2	A column symbol. The y dimension
.color	A column symbol. Colour of points
.shape	A column symbol. Shape of points
.size	A column symbol. Size of points
opacity	A number between 0 and 1. The opacity level of the data points
how_many_gates	An integer. The number of gates to label
.group_by	A column symbol. The column that is used to calculate distance (i.e., normally genes)
gate_list	A list of gates. It is returned by gate function as attribute \"gate\". If you want to create this list yourself, each element of the list is a data frame with x and y columns. Each row is a coordinate. The order matter.
...	Further parameters passed to the function gatepoints::fhs

Details

Maturing

This function allow the user to label data points in inside one or more 2D gates. This package is based on on the package gatepoints.

Value

A tbl object with additional columns for the inside gate information. additional columns for the rotated dimensions. The rotated dimensions will be added to the original data set as '<NAME OF DIMENSION> rotated <ANGLE>' by default, or as specified in the input arguments.

Examples

```
# Standard use - interactive

  if(interactive()){

 tidygate::tidygate_data  %>%
 distinct(`ct 1` , `ct 2`, Dim1, Dim2) %>%
 mutate(gate = gate_chr( Dim1, Dim2))

  }



library(magrittr)
library(dplyr)

# Standard use - programmatic
res_distinct =
 tidygate::tidygate_data  %>%
 distinct(`ct 1` , `ct 2`, Dim1, Dim2) %>%
```

```
 mutate(gate = gate_chr( Dim1, Dim2,gate_list = tidygate::gate_list))

# Grouping - programmatic
res =
 tidygate::tidygate_data  %>%
   mutate(gate = gate_chr(
     Dim1, Dim2,
     .group_by = c(`ct 1` , `ct 2`),
     gate_list = tidygate::gate_list
   ))
```

`gate_chr.numeric` *gate_chr*

Description

gate_chr

Usage

```
## S3 method for class 'numeric'
gate_chr(
  .dim1,
  .dim2,
  .color = NULL,
  .shape = NULL,
  .size = NULL,
  opacity = 1,
  how_many_gates = 1,
  .group_by = NULL,
  gate_list = NULL,
  ...
)
```

Arguments

`.dim1`	A column symbol. The x dimension
`.dim2`	A column symbol. The y dimension
`.color`	A column symbol. Colour of points
`.shape`	A column symbol. Shape of points
`.size`	A column symbol. Size of points
`opacity`	A number between 0 and 1. The opacity level of the data points
`how_many_gates`	An integer. The number of gates to label
`.group_by`	A column symbol. The column that is used to calculate distance (i.e., normally genes)

gate_list	A list of gates. It is returned by gate function as attribute \"gate\". If you want to create this list yourself, each element of the list is a data frame with x and y columns. Each row is a coordinate. The order matter.
...	Further parameters passed to the function gatepoints::fhs

---

gate_int.numeric *gate_int*

Description

gate_int

Usage

```
## S3 method for class 'numeric'
gate_int(
  .dim1,
  .dim2,
  .color = NULL,
  .shape = NULL,
  .size = NULL,
  opacity = 1,
  how_many_gates = 1,
  .group_by = NULL,
  gate_list = NULL,
  ...
)
```

Arguments

.dim1	A column symbol. The x dimension
.dim2	A column symbol. The y dimension
.color	A column symbol. Colour of points
.shape	A column symbol. Shape of points
.size	A column symbol. Size of points
opacity	A number between 0 and 1. The opacity level of the data points
how_many_gates	An integer. The number of gates to label
.group_by	A column symbol. The column that is used to calculate distance (i.e., normally genes)
gate_list	A list of gates. It is returned by gate function as attribute \"gate\". If you want to create this list yourself, each element of the list is a data frame with x and y columns. Each row is a coordinate. The order matter.
...	Further parameters passed to the function gatepoints::fhs

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