Package 'circles'

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Type Package

Title A Small Package for Drawing Various Combinations of Circles

Version 0.1.0

Description Contains the adaptation of bubblebath from 'MATLAB', developed by Adam Danz and available through the 'MATLAB' Central File Exchange, and the tools to transform a dataframe of radii and points to plot-able paths.

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URL https://github.com/ryan-odea/circles

BugReports https://github.com/ryan-odea/circles/issues

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Imports data.table

NeedsCompilation no

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Repository CRAN

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bubblebath   *Generate Bubble Bath (Chart) Dataframe*

Description

Creates a dataset of circles ("bubbles") with random centers and specified radii. When overlap is FALSE, circles are placed so they do not overlap.

Usage

```
bubblebath(
  frameSize = c(50, 50),
  circSize = seq(0.2, 5, length.out = 25),
  maxCircsPerRad = 10000,
  max_iter = 10000,
  density = 0.7,
  overlap = FALSE,
  suppressWarning = FALSE
)
```

Arguments

frameSize	A numeric vector of length 2 defining the frame's width and height (centered at 0).
circSize	A numeric vector specifying the radii of circles to place. If length is 2, it's interpreted as min and max for a sequence. If length > 2, the exact values are used as radii.
maxCircsPerRad	Maximum number of circles per radius.
max_iter	Maximum attempts to place each circle.
density	Density of circles, between 0 and 1.
overlap	Logical; if FALSE, circles won't overlap.
suppressWarning	
	Logical; if TRUE internal warnings are suppressed.

Value

A data frame with columns x, y, and r (circle centers and radii).

Examples

```
# Create bubble bath points
circles <- bubblebath(circSize = c(0.5, 1, 2, 3), overlap = FALSE)
```

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draw_circles   *Generate Points for Drawing Circles*

Description

Creates points along the perimeter of a circle for plotting as a path.

Usage

```
draw_circles(data, x_col = "x", y_col = "y", r_col = "r", n_points = 500)
```

Arguments

data	A data frame containing circle data (centers and radii).
x_col	Name of the column containing x-coordinates of circle centers.
y_col	Name of the column containing y-coordinates of circle centers.
r_col	Name of the column containing circle radii.
n_points	Number of points to generate around each circle perimeter.

Value

A dataframe with x, y coordinates for plotting and group identifier per circle plotted.

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