

Package ‘circles’

August 23, 2026

Type Package

Title Quickly Draw Various Combinations of Circular Objects

Version 0.1.2

Description Contains the adaptation of bubblebath from 'MATLAB' (Danz, 2020: <<https://www.mathworks.com/matlabcentral/fileexchange/70348>>) 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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Encoding UTF-8

RoxygenNote 7.3.2

Imports data.table

NeedsCompilation no

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Repository CRAN

Date/Publication 2026-08-22 23:00:02 UTC

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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)
```

draw_circles	<i>Generate Points for Drawing Circles</i>
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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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