

Package: circles (via r-universe)

June 10, 2026

Type Package

Title A Small Package for Drawing Various Combinations of Circles

Version 0.1.0

References Adam Danz (2020). Bubblebath.m
(<https://www.mathworks.com/matlabcentral/fileexchange/70348>),
MATLAB Central File Exchange.

Description This package currently contains the adaptation of
bubblebath from 'MATLAB' 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

Repository <https://ryan-odea.r-universe.dev>

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RemoteSubdir circles

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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

<code>frameSize</code>	A numeric vector of length 2 defining the frame's width and height (centered at 0).
<code>circSize</code>	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.
<code>maxCircsPerRad</code>	Maximum number of circles per radius.
<code>max_iter</code>	Maximum attempts to place each circle.
<code>density</code>	Density of circles, between 0 and 1.
<code>overlap</code>	Logical; if <code>FALSE</code> , circles won't overlap.
<code>suppressWarning</code>	Logical; if <code>TRUE</code> 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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