Package ‘RDP’

July 6, 2023

Title The Ramer-Douglas-Peucker Algorithm
Version 0.3.0
Description Pretty fast implementation of the Ramer-Douglas-
Peucker algorithm for reducing the number of points on a 2D curve.
Urs Ramer (1972), ``An iterative procedure for the polygonal approxima-
tion of plane curves" <doi:10.1016/S0146-664X(72)80017-0>.
License GPL-3
URL https://github.com/robertdj/RDP
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Author Robert Dahl Jacobsen [aut, cre]
Maintainer Robert Dahl Jacobsen <cran@dahl-jacobsen.dk>
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RamerDouglasPeucker

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Description

Implementation of the Ramer-Douglas-Peucker algorithm.

Author(s)

Maintainer: Robert Dahl Jacobsen <cran@dahl-jacobsen.dk>

References


See Also

Useful links:

- https://github.com/robertdj/RDP

RamerDouglasPeucker  Simplify a curve using the Ramer-Douglas-Peucker algorithm.

Description

Implements the Ramer-Douglas-Peucker algorithm for reducing the number of points on a curve.

Usage

RamerDouglasPeucker(x, y, epsilon, keep_index = FALSE)

Arguments

x  [numeric] The x values of the curve as a vector without NA values.
y  [numeric] The y values of the curve as a vector without NA values.
epsilon  [positive numeric(1)] The threshold for filtering outliers from the simplified curve.
keep_index  [logical] If TRUE, returns a column called index with the index locations of points that are kept.
RamerDouglasPeucker

Details

If there are no more than two points it does not make sense to simplify. In this case the input is returned without further checks of x and y. In particular, the input is not checked for NA values.

Value

A data.frame with x and y values of the simplified curve.

Examples

RDP::RamerDouglasPeucker(x = c(0, 1, 3, 5), y = c(2, 1, 0, 1), epsilon = 0.5)
RDP::RamerDouglasPeucker(x = c(0, 1, 3, 5), y = c(2, 1, 0, 1), epsilon = 0.5, keep_index = TRUE)
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