Package 'concaveman'

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Type Package

Title A Very Fast 2D Concave Hull Algorithm

Version 1.1.0

Description The concaveman function ports the 'concaveman' (<https://github.com/mapbox/concaveman>) library from 'mapbox'. It computes the concave polygon(s) for one or several set of points.

License GPL-3

Encoding UTF-8

LazyData true

Depends R (>= 2.10)

Imports V8, sf, magrittr, jsonlite, dplyr

RoxygenNote 7.1.0

Suggests testthat

URL https://joelgombin.github.io/concaveman/, http://www.github.com/joelgombin/concaveman/

BugReports http://www.github.com/joelgombin/concaveman/issues

SystemRequirements GDAL (>= 2.0.0), GEOS (>= 3.3.0), PROJ.4 (>= 4.8.0)

NeedsCompilation no

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Repository CRAN

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concaveman *concaveman: A very fast 2D concave hull algorithm.*

Description

This package is a simple R port (through V8) of a JavaScript library by Vladimir Agafonkin.

The concaveman function ports the concaveman library from mapbox. It computes the concave polygon for one set of points.

Usage

```
concaveman(points, concavity, length_threshold)

## S3 method for class 'matrix'
concaveman(points, concavity = 2, length_threshold = 0)

## S3 method for class 'sf'
concaveman(points, concavity = 2, length_threshold = 0)
```

Arguments

points	the points for which the concave hull must be computed. Can be represented as a matrix of coordinates or an sf object.
concavity	a relative measure of concavity. 1 results in a relatively detailed shape, Infinity results in a convex hull. You can use values lower than 1, but they can produce pretty crazy shapes.
length_threshold	when a segment length is under this threshold, it stops being considered for further detalization. Higher values result in simpler shapes.

Details

For details regarding the implementation, please see the original javascript library github page. This is just a thin wrapper, via V8.

Value

an object of the same class as points: a matrix of coordinates or an sf object.

Examples

```
data(points)
polygons <- concaveman(points)
plot(points)
plot(polygons, add = TRUE)
```

`points` *Fixtures data*

Description

This is just a test dataset which comes from the original mapbox library.

Usage

```
points
```

Format

an `sf` object with a 1000 points. Each of them is part of a group, indicated by variable k (generated by a k-means algorithm).

Source

https://github.com/mapbox/concaveman/blob/master/test/fixtures/points-1k.json

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