Package 'clustertend'

January 23, 2022

Type Package

Title Check the Clustering Tendency

Version 1.6

Date 2022-01-22

Description Calculate some statistics aiming to help analyzing the clustering tendency of given data. In the first version, Hopkins' statistic is implemented. See Hopkins and Skellam (1954) <doi:10.1093/oxfordjournals.aob.a083391>.

License GPL (>= 2)

NeedsCompilation no

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R topics documented:

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clustertend-package   *Check the Clustering Tendency*

Description

Calculate some statistics aiming to help analyzing the clustering tendency of the given data. In the first version, Hopkins' statistic is implemented.

Details

Package:	clustertend
Type:	Package
Version:	1.4
Date:	2015-05-17
License:	GPL (>= 2)

Preprocess your data into a dataframe or matrix form. Then several statistics about clustering tendency can be calculated. In the fisrt version, we only provided calculating function of Hopkins' statistic.

Author(s)

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References

Lawson, R.G. and Jurs, P.C.(1990) New index for clustering tendency and its application to chemical problems. Journal of Chemical Information and Computer Sciences. (Journal of Chemical Information and Computer Sciences, 1990, 30(1):36-41)

Examples

```
x<-matrix(runif(200,1,100),50,4);
hopkins(x,n=10)
```

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hopkins   *Calculate the Hopkins' statistic Calculate the Hopkins' statistic of given data. Note:"Package* clustertend *is deprecated. Use package* hopkins *instead. Sample data must be preprocessed into dataframe or matrix form before given as the value of parameter "data".*

Description

Calculate the Hopkins' statistic

Calculate the Hopkins' statistic of given data.

Note:"Package `clustertend` is deprecated. Use package `hopkins` instead.

Sample data must be preprocessed into dataframe or matrix form before given as the value of parameter "data".

Usage

```
hopkins(X, n = ceiling(nrow(X)/10))
```

Arguments

X	Data (matrix or data.frame) to check clusterability.
n	The number of rows to sample from X. The default is 1/10th the number of rows of X.

Value

The value returned is actually 1-Hopkins statistic.

Author(s)

Luo YiLan, Zeng RuTong.

References

Lawson, R.G. and Jurs, P.C.(1990). New index for clustering tendency and its application to chemical problems. Journal of Chemical Information and Computer Sciences. 30(1):36-41.

Examples

```
set.seed(1)
hopkins(iris[,-5], n=15)
```

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