Package 'royston'

February 20, 2015

Version 1.2

Date 2015-02-02

Title Royston's H Test: Multivariate Normality Test

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Depends R (>= 2.15.0)

Imports nortest, moments

Description Performs a multivariate normality test based on Royston's H test

URL http://journal.r-project.org/archive/2014-2/korkmaz-goksuluk-zararsiz.pdf

License GPL (>= 2)

NeedsCompilation no

Repository CRAN

Date/Publication 2015-02-02 12:43:26

R topics documented:

royston-package 1
royston.test 2

Index **4**

`royston-package` *Royston's Multivariate Normality Test*

Description

Performs a multivariate normality test based on Royston's H test

Details

Package:	royston
Type:	Package
License:	GPL (>=2)

royston.test(a)

Author(s)

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`royston.test` *Royston's Multivariate Normality Test*

Description

A function to generate the Shapiro-Wilk's W statistic needed to feed the Royston's H test for multivariate normality

Usage

```
royston.test(a)
```

Arguments

`a`	A numeric matrix or data frame

Details

If kurtosis of the data greater than 3 then Shapiro-Francia test is better for leptokurtic samples else Shapiro-Wilk test is better for platykurtic samples.

Value

`statistic`	the value of Royston's H statistic at significance level 0.05
`p.value`	an approximate p-value for the test with respect to equivalent degrees of freedom (edf)

Author(s)

Selcuk Korkmaz

References

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See Also

`shapiro.test` `sf.test` `kurtosis` `mahalanobis` `qqplot` `qchisq`

Examples

```
a=iris[1:50,1:4] # Iris data only for setosa and four variables
royston.test(a)  # Data analyzed have a non-normal distribution.

#Variable 4 (petal width) is markedly non-normal. So when take off that variable;

dev.new()
a=iris[1:50,1:3] # Iris data only for setosa and three variables
royston.test(a)  # Data analyzed have a normal distribution.
```

Index

kurtosis, *3*

mahalanobis, *3*

qchisq, *3*
qqplot, *3*

royston *(*royston-package*)*, 1
royston-package, 1
royston.test, 2

sf.test, *3*
shapiro.test, *3*