Package ‘royston’

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Title Royston's H Test: Multivariate Normality Test
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Description Performs a multivariate normality test based on Royston's H test
License GPL (>= 2)
NeedsCompilation no
Repository CRAN
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royston-package Royston’s Multivariate Normality Test

Description
Perform a multivariate normality test based on Royston’s H test
Details

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

royston.test(a)

Author(s)

Selcuk Korkmaz
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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

<table>
<thead>
<tr>
<th>statistic</th>
<th>the value of Royston’s H statistic at significance level 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>p.value</td>
<td>an approximate p-value for the test with respect to equivalent degrees of freedom (edf)</td>
</tr>
</tbody>
</table>

Author(s)

Selcuk Korkmaz
royston.test

References


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.
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