Package 'mvnormtest'

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Title Normality Test for Multivariate Variables

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Description Generalization of Shapiro-Wilk test for multivariate variables.

License GPL

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Depends stats

NeedsCompilation no

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R topics documented:

`mshapiro.test` *Shapiro-Wilk Multivariate Normality Test*

Description

Performs the Shapiro-Wilk test for multivariate normality.

Usage

```
mshapiro.test(U)
```

Arguments

U	a numeric matrix of data values, the number of which must be for each sample between 3 and 5000.

Value

A list with class "htest" containing the following components:

statistic	the value of the Shapiro-Wilk statistic.
p.value	the p-value for the test.
method	the character string "Shapiro-Wilk normality test".
data.name	a character string giving the name(s) of the data.

Author(s)

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References

Czeslaw Domanski (1998) Wlasnosci testu wielowymiarowej normalnosci Shapiro-Wilka i jego zastosowanie. *Cracow University of Economics Rector's Lectures*, **No. 37**.

Patrick Royston (1982) An Extension of Shapiro and Wilk's W Test for Normality to Large Samples. *Applied Statistics*, **31**, 115–124.

Patrick Royston (1982) Algorithm AS 181: The W Test for Normality. *Applied Statistics*, **31**, 176–180.

Patrick Royston (1995) A Remark on Algorithm AS 181: The W Test for Normality. *Applied Statistics*, **44**, 547–551.

See Also

shapiro.test for univariate samples, qqnorm for producing a normal quantile-quantile plot.

Examples

```
library(mvnormtest)
data(EuStockMarkets)

C <- t(EuStockMarkets[15:29,1:4])
mshapiro.test(C)

C <- t(EuStockMarkets[14:29,1:4])
mshapiro.test(C)

R <- t(diff(t(log(C))))
mshapiro.test(R)

dR <- t(diff(t(R)))
mshapiro.test(dR)
```

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