Package ‘discnorm’

May 20, 2020

Type Package

Title Test for Discretized Normality in Ordinal Data

Version 0.1.0

Description Tests whether multivariate ordinal data may stem from discretizing a multivariate normal distribution.


License GPL (>= 2)

Encoding UTF-8

LazyData true

Suggests knitr, rmarkdown

VignetteBuilder knitr

Imports lavaan, arules, sirt, MASS, pbivnorm, psych

RoxygenNote 7.1.0

NeedsCompilation no

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bootTest

*Bootstrap test for discretized normality*

**Description**

bootTest is a bootstrap test for whether an ordinal dataset is consistent with being a discretization of a multivariate normal dataset.

**Usage**

```r
bootTest(my.data, B = 1000, verbose = TRUE)
```

**Arguments**

- `my.data`: A dataset containing ordinal data. Must contain only integer values.
- `B`: Number of bootstrap samples.
- `verbose`: If true, bootstrap progress is printed to the console.

**Value**

p-value associated with the underlying normality hypothesis.

**References**


**Examples**

```r
set.seed(1)
norm.data <- MASS::mvrnorm(300, m=rep(0,3),
  Sigma= cov(MASS::mvrnorm(15, mu=rep(0,3), Sigma=diag(3))))
disc.data <- apply(norm.data, 2, cut,
  breaks = c(-Inf, 0, Inf), labels=FALSE)# normal data discretized
pvalue <- bootTest(disc.data, B=500)
#no support for underlying non-normality
```
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