Package 'rms.gof'

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Type Package

Title Root-mean-square goodness-of-fit test for simple null hypothesis

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Author Shubhodeep Mukherji <deep.mukherji@utexas.edu>

Maintainer Shubhodeep Mukherji <deep.mukherji@utexas.edu>

Description This package can be used to test any simple null hypothesis using the root-mean-square goodness of fit test. Monte Carlo estimation is used to calculate the associated P-value.

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`rms.gof-package` *Root-mean-square goodness-of-fit test for simple null hypothesis*

Description

This package can be used to test any simple null hypothesis using the root-mean-square goodness of fit test. Monte Carlo estimation is used to calculate the associated P-value.

Details

Package:	rms.gof
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License:	GPL-3

To use this package, the model must be a completely specified discrete probability distribution. The function rms.pval() returns the P-value.

Author(s)

Shubhodeep Mukherji <deep.mukherji@utexas.edu>

Maintainer: Shubhodeep Mukherji <deep.mukherji@utexas.edu>

References

"Chi-square and classical exact tests often wildly misreport significance; the remedy lies in computers," by Will Perkins, Mark Tygert, and Rachel Ward.

See Also

rms.pval

`rms.pval` *P-value for root-mean-square goodness-of-fit test for simple null hypothesis*

Description

Returns the P-value associated with a root-mean-square test.

Usage

```
rms.pval(observed, expected, num_sim= 1000)
```

Arguments

`observed`	The observed data
`expected`	The expected data
`num_sim`	Number of Monte-Carlo simulations desired. The default is 1,000 simulations.

Details

This function calls on test.rms() to calculate the root-mean-square test statistic before calculating the P-value using Monte-Carlo simulation.

Value

Returns the P-value associated with the root-mean-square test.

Author(s)

Shubhodeep Mukherji <deep.mukherji@utexas.edu>

References

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See Also

test.rms

Examples

```
#This example is from section 5.1.2 of the referenced text

k <- c(1:128)
#Define model distribution (exp) and observed distribution (obs)
C1 <- 1/sum(1/k)
exp <- C1/k

C2 <- 1/sum(1/k^2)
obs <- C2/k^2

rms.pval(obs,exp,10000)
```

---

test.rms *Computing the root-mean-square test statistic*

Description

Calculates the root-mean-square test statistic between the observed data and fully-specified model distribution.

Usage

```
test.rms(observed, expected)
```

Arguments

observed	The observed data
expected	The expected data

Details

Called on by rms.pval().

Author(s)

Shubhodeep Mukherji <deep.mukherji@utexas.edu>

References

"Chi-square and classical exact tests often wildly misreport significance; the remedy lies in computers," by Will Perkins, Mark Tygert, and Rachel Ward.

See Also

rms.pval

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