

Package ‘UniExactFunTest’

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Type Package

Title Uniform Exact Functional Tests for Contingency Tables

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Author Yiyi Li [aut, cre] (<<https://orcid.org/0000-0001-8859-3987>>),
Joe Song [aut] (<<https://orcid.org/0000-0002-6883-6547>>)

Maintainer Yiyi Li <gtarex@nmsu.edu>

Description Testing whether two discrete variables have a functional relationship under null distributions where the two variables are statistically independent with fixed marginal counts.
The fast enumeration algorithm was based on (Nguyen et al. 2020) <[doi:10.24963/ijcai.2020/372](https://doi.org/10.24963/ijcai.2020/372)>.

License LGPL (>= 3)

Encoding UTF-8

Imports Rcpp (>= 1.0.5)

LinkingTo Rcpp

Depends R (>= 3.5.0), stats

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

RoxygenNote 7.2.3

NeedsCompilation yes

Repository CRAN

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UEFT

Uniform Exact Functional Test on Two Discrete Random Variables

Description

Perform the uniform exact functional test on a contingency table to determine if the column variable is a function of the row variable.

Usage

```
UEFT(input, correct, log.p)
```

Arguments

| | |
|---------|--|
| input | A matrix of nonnegative integers representing a contingency table. Column is the casual and row is the effect. |
| correct | Logical; if implement the continuity correction. The description is at details. The default is TRUE. |
| log.p | Logical; if TRUE, the p-value is given as log(p). The default is FALSE. The default is FALSE. |

Details

The uniform idea was implemented using uniform marginal distribution of a square table as null hypothesis. The continuity correction algorithm

Value

The exact p-value of the test.

Author(s)

Yiyi Li, Joe Song

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