Package 'PermutationR'

January 20, 2025

Type Package

Title Conduct Permutation Analysis of Variance in R

Version 0.1.0

Author Osama Abdalla

Maintainer Osama Abdalla <osama.abdalla@mail.utoronto.ca>

Description Conduct permutation One-Way or Two-Way Analysis of Variance in R. Use different permutation types for two-way designs.

License MIT + file LICENSE

Encoding UTF-8

NeedsCompilation no

Repository CRAN

Date/Publication 2022-01-06 09:30:06 UTC

Contents

---

permuANOVA   *permuANOVA*

Description

Conducts permutational one-way and two-way ANOVAs. This code has been modified from Howell D. (2015)

Usage

```
permuANOVA(y,x,z, perm.type="unrestricted", reps=5000)
```

Arguments

y	Dependent variable, numeric vector
x	Independent variable, integer vector or factor up to 10 levels
z	(Optional) Independent variable, integer vector or factor up to 10 levels
perm.type	(Optional) Method of permutation for two-way designs. Either "unrestricted" or "restricted". Default is "unrestricted"
reps	Number of permutations, default is 5000.

Details

"unrestricted" computes main effect permutations in an unrestricted fashion; "restricted" restricts main effect permutations within levels of the other independent variable. In both cases, the interaction is computed in an unrestricted fashion

Value

For two-way designs: returns a data-frame containing p-values from permutation test for "Variable_x", "Variable_z" and interaction "x:z" For one-way designs: returns a data-frame containing p-values from permutation test for "Variable_x" only.

Author(s)

Osama Abdalla osama.abdalla@mail.utoronto.ca

References

Howell D. (2015). Permutation Tests for Factorial ANOVA Designs. Retrieved from: <https://www.uvm.edu/~statdhtx/StatPages

See Also

Package permuco function aovperm() and Package RVAideMemoire function perm.anova()

Examples

```
Data <- ToothGrowth
attach(ToothGrowth)
permuANOVA(y = len, x = supp, reps=99)

permuANOVA(y=len,x=supp,z=dose, perm.type="unrestricted", reps=99)

permuANOVA(y=len,x=supp,z=dose, perm.type="restricted", reps=99)
```

Index