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anova.MC {AMC}
R Documentation

ANOVA using Monte Carlo method

Description:

Performs an analysis of variance on randomized block factorial design for two factors using Monte Carlo methods.

Usage:

```
anova.MC(dados,n)
```

Arguments:

`dados` data.frame with the data.
`n` number of times randomization is performed.

Details:

Data input must be an object of class data.frame in which the first column must be a random variable (block), the second and third columns must be the two factors of interest and the fourth column must be the response variable. The columns names must be "bloco", "A", "B" and "resp". The factors being tested must be dummy variables in the form of 0 (presence) or 1 (absence) and the blocks, which is not going to be tested, must be represented by an integer, ranging from 1 untill nb the total number of blocks).

Value:

The function returns a data.frame with the p values for each of the factors calculated on the F values, also found for each factor. The factors are called "A" and "B", for the factors on the input data.frame second and third columns, respectively; the interaction between these two factors is called "A.B".

Warning:

Even the Monte Carlo analysis of variance assume homogeneity of variances among the groups being

compared.

Author(s):

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References:

Gotelli, N. J. and Ellison, A. M. (2004) A primer of ecological statistics. Sinauer Associates.

Manly, B. F. J. (2007) Randomization, bootstrap and Monte Carlo methods in Biology. (3rd ed.) Chapman & Hall/CRC.

See also:

anova.power to test ANOVA sensibility to your data.

Examples:

```
dados=data.gen(10,50,8,3,12,15,5)
anova.MC(dados,99)
```

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