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marcel.vaz

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anova.graph {AMC}
R Documentation

ANOVA graphs

Description:

Creates a graph with the means of each treatment and the expected value if there is no interaction between the factors.

Usage:

anova.graph(dados)

Arguments:

dados data.frame with the original data.

#### 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  $\theta$  (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 graph shows the relations between the factors effects in the form of the treatments means.

The first of the two factors (second column of input data.frame) will be the dependent variable and

the second one is represented by two types of line, as explicited in the graphic legend.

The asterisik plotted in the graphic is the expected value of the treatment combining the two factors

at the same time (treatment A.B, in this case).

The error bars are calculated using bootstrap (based on 999 resamples for

## each treatment).

## Warning:

Probablility of committing type I error  $(\alpha)$  when doing multiple comparisons may be underestimated.

## Author(s):

Original version by Marcel Vaz marcel.vaz@usp.br

## References:

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

## See also:

data.gen to create random data conformed with the randomized block design involving two factors.

anova.MC to do a Monte Carlo test the effectes of two factor from randomized block designs.

anova.power to perform a power analysis of Monte Carlo ANOVA.

## Examples:

dados=data.gen(10,30,5,1,10,15,10)
anova.graph(dados)

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