Package 'Missplot'

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Type Package

Title Missing Plot Technique in Design of Experiment

Version 0.1.0

Description

A system for testing differential effects among treatments in case of Randomised Block Design and Latin Square Design when there is one missing observation. Methods for this process are as described in A.M.Gun,M.K.Gupta and B.Dasgupta(2019,ISBN:81-87567-81-3).

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Author Shantanu Nayek [cre, aut],
Saheli Datta [aut]

Maintainer Shantanu Nayek <shantanuashis@gmail.com>

Repository CRAN

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LSD.miss   *Analysis of LSD when there is one missing observation*

Description

Analysis of LSD when there is one missing observation

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Usage

```
LSD.miss(data, row.miss, col.miss)
```

Arguments

data	A data-frame containing response in the first column ,row number in the second column, column number in the third column , treatment number in the fourth column corresponding to the response value.
row.miss	Row number corresponding to the missing observation.
col.miss	Column number corresponding to the missing observation.

Details

In design of experiments in LSD setup if there is one missing observation present in the design , we can use the function LSD.miss to estimate the missing observation for testing the differential effects for the treatments. Here, we estimate the missing obsevation by minimizing the SSE of the design.

Value

A data-frame containing x.hat , SSE x.hat , x_double.hat , SSE x_double.hat, F statistics , p-value.

Credits

Credits to Professor Surupa Chakraborty for building the theoritical concepts of Design of Experiment and Professor Madhura Dasgupta for basic concepts for R.

Remark

Information on row number and column number corresponding to the missing observation is to be known.

Author(s)

Saheli Datta , Shantanu Nayek

Examples

```
#Observation corresponding to the second row and third column is missing in the data
data=data.frame(res=rnorm(16,35,20),row_no=rep(1:4,each=4),col_no=rep(1:4,times=4),
    treat=c(1,2,3,4,2,3,4,1,3,4,1,2,4,1,2,3))
LSD.miss(data,2,3)
```

RBD.miss   *Analysis of RBD when there is one missing observation*

Description

Analysis of RBD when there is one missing observation

Usage

```
RBD.miss(data, bl.miss, trt.miss)
```

Arguments

data	A data-frame containing response in the first column , block number in the second column, treatment number in the third column corresponding to the response value.
bl.miss	Block number corresponding to the missing observation.
trt.miss	Treatment number corresponding to the missing observation.

Details

In design of experiments in RBD setup if there is one missing observation present in the design , we can use the function RBD.miss to estimate the missing observation for testing the differential effects for the treatments. Here, we estimate the missing obsevation by minimizing the SSE of the design.

Value

A data-frame containing x.hat , SSE x.hat , x_double.hat , SSE x_double.hat, F statistics , p-value.

Credits

Credits to Professor Surupa Chakraborty for building the theoritical concepts of Design of Experiment and Professor Madhura Dasgupta for basic concepts for R.

Author(s)

Shantanu Nayek , Saheli Datta

Examples

```
#Observation corresponding to the second block and third treatment is missing in the data
data=data.frame(res=rnorm(16,35,20),
block_no=rep(1:4,each=4),
trt_no=rep(1:4,times=4))
RBD.miss(data,2,3)
```

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