Package ‘ds’
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Description

The package performs various analyzes of descriptive statistics, including correlations

Details
Author(s)

Emmanuel Arnhold
emmanuelarnhold@yahoo.com.br

References


Examples

# Example of weights and heart girths of cows.
# Weight was measured in kg and heart girth in cm on 10 cows (Kaps and Lamberson, 2009).
Weight=c(641, 620, 633, 651, 640, 666, 650, 688, 680, 670)
Heart_girth=c(205, 212, 213, 216, 216, 217, 218, 219, 221, 226)
data=data.frame(Weight, Heart_girth)

r1<-dscor(data)
r1

r2<-dscor(data, option=2)
r2

r3<-dscor(data, method=2, option=1)
r3

r4<-dscor(data, method=2, option=2)
r4

r5<-gds(data)
r5
**dplot**

*Dispersion Plot*

**Description**

Plot dispersion of first column of data in relation other columns

**Usage**

```r
dplot(data, xlab = "Variable x", ylab = "Variable y", position = 1, colors = TRUE, type = "o", mean=TRUE)
```

**Arguments**

- `data`: data is a data.frame
- `xlab`: x-axis title
- `ylab`: y-axis title
- `position`: position of legend
  - top=1 (default)
  - bottomright=2
  - bottom=3
  - bottomleft=4
  - left=5
  - topleft=6
  - topright=7
  - right=8
  - center=9
- `colors`: colors lines =TRUE (default) or black lines =FALSE
- `type`: type of plot (see the plot function)
- `mean`: plot means = TRUE (default) or plot original data = FALSE

**Author(s)**

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**See Also**

dscor, gds, tables
Examples

```r
data = data.frame(Time, x, y, z)
dplot(data)
```

---

### dscor

**Descriptive Statistics (correlations)**

#### Description

The function estimates and test correlations

#### Usage

```r
dscor(data, method = 1, option = 1)
```

#### Arguments

- **data**: data is a data.frame or matrix
- **method**: method = 1 Pearson (default)  
  method = 2 Spearman
- **option**: option = 1 return data.frame (default)  
  option = 2 return matrix

#### Value

The function returns correlations (Pearson and Spearman) and probability values of the t test

In option = 2 (return matrix), diagonally above contains the correlations and diagonally below contains the p-values of t test

#### Author(s)

Emmanuel Arnhold

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#### References

See Also
gds, cor, cor.test

Examples

# Example of weights and heart girths of cows.
# Weight was measured in kg and heart girth in cm on 10 cows (Kaps and Lamberson, 2009).

Weight=c(641, 620, 633, 651, 640, 666, 650, 688, 680, 670)
Heart_girth=c(205, 212, 213, 216, 216, 217, 218, 219, 221, 226)

data=data.frame(Weight,Heart_girth)

#Pearson (table)
r1<-dscor(data)
r1

#Pearson (matrix)
r2<-dscor(data, option=2)
r2

# Spearman (table)
r3<-dscor(data, method=2, option=1)
r3

# Spearman (matrix)
r4<-dscor(data, method=2, option=2)
r4

# fictional example

var1=c(10,13,14,16,18,22,29,38,35)
var2=c(0.5,1,1.5,2,2.5,3,3.5,4,4.5)
var3=c(102,NA,106,91,109,108,120,101,NA)
var4=c(500,456,423,378,312,263,200,120,50)
var5=c(18,09,22,NA,26,59,10,NA,96)

table=data.frame(var1,var2,var3,var4,var5)

#Pearson
r5<-dscor(table)
r5

r6<-dscor(table, option=2)
r6

# Spearman
r7<-dscor(table, method=2, option=1)
r7

r8<-dscor(table, method=2, option=2)
r8
gds  General Descriptive Statistics

Description

The function performs various analyzes of descriptive statistics

Usage

gds(data)

Arguments

data       data is a numeric vector, data.frame or matrix

Value

The function return mean, maximum, minimum, median, mean + or - standard deviation, quantiles, n, range, variance, standard deviation, standard error of the mean, coefficiente of variation, skewness, kurtosis, normality test (p-value of the Shapiro-Wilk test)

Author(s)

Emmanuel Arnhold
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References


See Also

dscor, cor, cor.test, summary

Examples

# Example of weights and heart girths of cows.
# Weight was measured in kg and heart girth in cm on 10 cows (Kaps and Lamberson, 2009).

Weight=c(641, 620, 633, 651, 640, 666, 650, 688, 680, 670)
Heart_girth=c(205, 212, 213, 216, 216, 217, 218, 219, 221, 226)

r1<-gds(Weight)
r1

r2<-gds(Heart_girth)
r2

data=data.frame(Weight,Heart_girth)

r3<-gds(data)
r3

# fictional example

var1=c(10,13,14,16,18,22,29,28,35)
var2=c(0.5,1.5,2,2.5,3,3.5,4,4.5)
var3=c(102,NA,106,91,109,108,120,101,NA)
var4=c(500,456,423,378,312,263,200,120,50)
var5=c(18,9,22,NA,26,59,10,NA,96)


table=data.frame(var1,var2,var3,var4,var5)

r6=gds(table)
r6

#kurtosis
r6[24,]

r6[24,]-3

---

**Tables of Categorical Variables**

**Description**

Organizes various tables of categorical variables and tests tables (Chi-square and Fisher's exact test)

**Usage**

tables(data)

**Arguments**

- `data` data is a data.frame

**Author(s)**

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**See Also**

gds, dscor, dplot
Examples

treatments=gl(2, 30, labels = c("Control", "Treat"))
resultsA=rep(c("positive", "negative", "positive", "negative"),c(25,5,7,23))
resultsB=rep(c("positive", "negative", "positive", "negative"),c(28,2,8,22))
resultsC=rep(c("positive", "negative", "positive", "negative"),c(16,14,13,17))

data=data.frame(treatments, resultsA, resultsB, resultsC)
r=tables(data)

names(r)

r

r[1]
r[2]
r[6]

X function

Description

The function performs input tables of the environment R

Usage

X(x)

Arguments

x  x is NULL

Details

insert
X ()

select the desired table and press enter
observation: the mouse cursor should be in front of X ()

Value

returns a data.frame
Author(s)
   Emmanuel Arnhold
   emmanuelarnhold@yahoo.com.br

See Also
   gds, dscor

Examples
   #x()
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