Package ‘ds’

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Title Descriptive Statistics
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Description Performs various analyzes of descriptive statistics, including correlations, graphics and tables.
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**Description**

The package performs various analyzes of descriptive statistics, including correlations.

**Details**
Author(s)

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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, 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

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
**dscor**

Descriptive Statistics (correlations)

**Examples**

```r
time = c(10, 20, 30, 40, 50, 60, 70)
x = c(1, 3, 5, 6, 7, 9, 6)
y = c(4, 6, 8, 9, 10, 15, 16)
z = c(1, 5, 18, 19, 22, 20, 15)
data = data.frame(time, x, y, z)
dplot(data)
```

**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)**

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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, 28, 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, 89, 22, NA, 26, 59, 10, NA, 96)

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

# Pearson
r5<-dscor(table)
r5

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

r8<-dscor(table, method=2, option=2)
r8
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)

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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
tables <- gds(Heart_girth)

r3 <- gds(data)

data <- data.frame(Weight, Heart_girth)

# fictional example
var1 <- c(10, 13, 14, 16, 18, 22, 29, 28, 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)

r6 <- gds(table)
r6

# kurtosis
r6[24, ]
r6[24, ] - 3

---

`tables`  
**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

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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[3]

---

X function

Description

The function performs input tables of the environment R

Usage

X(x)

Arguments

x x is NULL

Details

insert

select the desired table and press enter

observation: the mouse cursor should be in front of X ()

Value

returns a data.frame
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See Also

gds, dscor

Examples

#X( )