Package 'mycor'

October 13, 2022

Title Automatic Correlation and Regression Test in a 'data.frame'

Version 0.1.1

Description Perform correlation and linear regression test
among the numeric fields in a data.frame automatically
and make plots using pairs or lattice::parallelplot.

Depends R (>= 3.1.1)

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URL https://github.com/cardiomoon/mycor

LazyData true

Imports lattice

Suggests knitr, testthat

VignetteBuilder knitr

RoxygenNote 6.0.1

NeedsCompilation no

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R topics documented:

`mycor` *Perform correlation and linear regression for a data.frame automatically*

Description

Perform correlation and linear regression for a data.frame automatically

Usage

```
mycor(x, ..., digits)

## Default S3 method:
mycor(x, ..., digits = 3)

## S3 method for class 'formula'
mycor(formula, data, ..., digits = 3)
```

Arguments

`x`	A data.frame.
`...`	further arguments to be passed to `cor.test`.
`digits`	integer indicating the number of decimal places (round) or significant digits (signif) to be used.
`formula`	a formula of the form ~ u + v, where each of u and v are numeric variables giving the data values for one sample. The samples must be of the same length.
`data`	A data.frame
`mycor`	Object to mycor

Value

mycor returns as object of class "mycor"

The function summary is used to print a summary of the result. The function plot is used to plot the results using `pairs` and `parallelplot`.

An object of class "mycor:" is a list containing at least following components:

df a data.frame

select logical vectors returns if columns of df is.numeric

out a list of class "htest" from `cor.test` between the last paired samples in a data.frame.

r a matrix consist of r values from `cor.test` between all pairs of numeric data from a data.frame

p a matrix consist of p values from `cor.test` between all pairs of numeric data from a data.frame

slope a matrix consist of slope values from `lm` between all pairs of numeric data from a data.frame

intercept a matrix consist of intercept values from `lm` between all pairs of numeric data from a data.frame

Methods (by class)

- `default`: for class data.frame
- `formula`: for class "formula"

Examples

```
out=mycor(iris)
plot(out)
plot(out, groups=Species)
plot(out,type=2,groups=species)
plot(out,type=4,groups=species)
out1=mycor(~mpg+disp+wt+hp,data=mtcars,alternative="greater",methods="kendall",
           conf.level=0.95)
plot(out1,type=3)
plot(out1,type=4,groups=cyl)
```

`mylm` *Correlation and Fitting linear model function for function "mycor"*

Description

Correlation and Fitting linear model function for function "mycor"

Usage

```
mylm(y, x, ..., digits = 3)
```

Arguments

`y`	numeric vectors of data values
`x`	numeric vectors of data values
`...`	further arguments to be passed to or from methods.
`digits`	integer indicating the number of decimal places (round) or significant digits (signif) to be used.

Value

mylm returns a list of following components

out a list of class "htest" from `cor.test` between the last paired samples in a data.frame.

result a numeric vector of length 4, consist of r and p values from `cor.test`,slope and intercept values from `lm` between numeric vector y and x

panel.cor *Make correlation plot for plot of class "mycor"*

Description

Make correlation plot for plot of class "mycor"

Usage

```
panel.cor(x, y, digits = 2, prefix = "", cex.cor)
```

Arguments

x	a numeric vector
y	a numeric vector
digits	integer indicating the number of decimal places (round) or significant digits (signif) to be used.
prefix	a character vector
cex.cor	a numeric variable

panel.hist *Make plot with histogram for plot of class "mycor"*

Description

Make plot with histogram for plot of class "mycor"

Usage

```
panel.hist(x, ...)
```

Arguments

x	a numeric vector
...	further arguments to be passed to or from methods.

plot.mycor *Plot for an object of class "mycor"*

Description

Plot for an object of class "mycor"

Usage

```
## S3 method for class 'mycor'
plot(x, ..., groups = -1, type = 1)
```

Arguments

x	an object of class "mycor"
...	further arguments to be passed to pairs or parallelplot(in case of "type" argument is 4).
groups	a variable to be evaluated in a data.frame x$df, expected to act as a grouping variable within each panel, typically used to distinguish different groups by varying graphical parameters like color and line type.
type	specify the type of plot

Examples

```
out=mycor(iris)
plot(out)
plot(out, groups=Species)
plot(out,type=2,groups=species)
out1=mycor(mtcars[1:5],alternative="greater",methods="kendall",
           conf.level=0.95)
plot(out1,type=3)
plot(out1,type=4,groups=cyl)
```

print.mycor *Print function for class "mycor"*

Description

Print function for class "mycor"

Usage

```
## S3 method for class 'mycor'
print(x, ...)
```

Arguments

x	an object of class "mycor", a result of a call to mycor.
...	further arguments to be passed to or from methods.

Examples

```
out=mycor(iris)
print(out)
```

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summary.mycor *Summarizing function for class "mycor"*

Description

Summarizing function for class "mycor"

Usage

```
## S3 method for class 'mycor'
summary(object, ...)
```

Arguments

object	an object of class "mycor", a result of a call to mycor.
...	further arguments to be passed to or from methods.

Examples

```
out=mycor(iris)
summary(out)
```

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