

Package ‘mycor’

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Title Automatic Correlation and Regression Test in a Data Frame

Version 0.1

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

Depends R (>= 3.1.1)

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LazyData true

Imports lattice

Suggests knitr, testthat

VignetteBuilder knitr

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| | |
|-------|---|
| mycor | <i>Perform correlation and linear regression for a data.frame automatically</i> |
|-------|---|

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 <code>cor.test</code> . |
| digits | integer indicating the number of decimal places (round) or significant digits (significant) to be used. |
| formula | a formula of the form $\sim u + v$, 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 | <i>Make correlation plot for plot of class "mycor"</i> |
|-----------|--|

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 | <i>Make plot with histogram for plot of class "mycor"</i> |
|------------|---|

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 | <i>Plot for an object of class "mycor"</i> |
|------------|--|

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 1 makes plot with pairs 2 makes plot with pairs using panel.hist as a diagonal panel 3 makes plot with pairs using panel.cor as a upper panel 4 makes plot with parallelplot using panel.cor as a upper panel |

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)
```

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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