

Package: gfunctions (via r-universe)

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Type Package

Title G-Functions

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Author Genaro Sucarrat [aut, cre]

Maintainer Genaro Sucarrat <gsucarrat@gmail.com>

Description Modified versions of the lag() and summary() functions:
glag() and gsummary(). The prefix 'g' is a reminder of who to
blame if things do not work as they should.

License GPL (>= 2)

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gfunctions-package glag() and gsummary(): Modified versions of lag() and summary()

Description

`glag()` and `gsummary()` are modifications of the `lag()` and `summary()` functions from the `stats` package in that they return different information.

Details

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Author(s)

Genaro Sucarrat: <http://www.sucarrat.net/>

Maintainer: Genaro Sucarrat

See Also

`lag()`, `summary()`

glag *Lag a vector or a matrix, with special treatment of zoo and ts objects*

Description

The `glag()` function is similar to the `lag()` function from the `stats` package, but `glag()` actually *lags* (the default in `lag()` is to lead). The function `glag()` also enables padding (for example NAs or 0s) of the lost entries. Contrary to the `lag()` function, however, the default in `glag()` is to pad (with NAs). The `glag()` is particularly suited for `zoo` objects, since their indexing is retained. The prefix `g` is a reminder of who to blame if things do not work properly.

Usage

```
## generic:  
glag(x, ...)  
## Default S3 method:  
glag(x, k = 1, pad = TRUE, pad.value = NA, ...)
```

Arguments

x	a numeric vector or matrix, or objects of class <code>zoo</code> or <code>ts</code> .
k	integer equal to the lag (the default is 1). Negative values (that is, 'leading') is not possible.
pad	logical. If TRUE (default), then the lost entries are padded with <code>pad.value</code> . If FALSE, then no padding is undertaken.
pad.value	the padding value.
...	additional arguments

Value

A vector or matrix, or objects of class `zoo` or `ts`, with the lagged values.

Author(s)

Genaro Sucarrat, <http://www.sucarrat.net/>

See Also

[lag\(\)](#), [lag.zoo\(\)](#)

Examples

```
##lag series with NA for the missing entries:
x <- rnorm(5)
glag(x)

##lag series with no padding:
x <- rnorm(5)
glag(x, pad = FALSE)

##lag series and retain the original zoo-index ordering:
x <- as.zoo(rnorm(5))
glag(x)

##lag two periods:
glag(x, k = 2)
```

gsummary

The gsummary() function

Description

The `gsummary()` function provides an alternative to the `summary()` function by returning different information. The prefix `g` is a reminder of who to blame if things do not work properly.

Usage

```
## generic:
gsummary(object, ...)
## Default S3 method:
gsummary(object, ...)
## S3 method for class 'data.frame'
gsummary(object, ...)
## S3 method for class 'lm'
gsummary(object, vcov.type = c("ordinary", "robust", "hac"), confint.level = 0.95, ...)
## S3 method for class 'glm'
gsummary(object, confint.level = 0.95, ...)
```

Arguments

object	an object of suitable class, for example <code>data.frame</code> , <code>lm</code> or <code>glm</code> .
vcov.type	a character string that determines the variance-covariance estimator. If "ordinary" (default), then the ordinary estimator is used (<code>vcov.lm()</code>). If "robust", then the heteroscedasticity robust estimator of White (1980) (<code>vcovHC()</code> with <code>type = "HC"</code>) is used. If "hac", then the heteroscedasticity and autocorrelation robust estimator of Newey and West (1987) (<code>NeweyWest()</code>) is used.
confint.level	a number between 0 and 1 (the default is 0.95), or NULL. If a number, then confidence intervals are printed (the default is 95 percent). If NULL, then confidence intervals are not printed.
...	additional arguments

Value

No value is returned, the function only prints. The content of the print depends on the class of its main argument object.

Author(s)

Genaro Sucarrat, <http://www.sucarrat.net/>

References

Halbert White (1980): 'A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity', *Econometrica* 48, pp. 817-838. Whitney K. Newey and Kenned D. West (1987): 'A Simple, Positive Semi-Definite, Heteroskedasticity and Autocorrelation Consistent Covariance Matrix', *Econometrica* 55, pp. 703-708.

See Also

[summary\(\)](#)

Examples

```
##simulate some data:
set.seed(123)
y <- rnorm(20); x <- rnorm(20); z <- rnorm(20)

##illustrate gsummary.data.frame():
mydataframe <- as.data.frame(cbind(y,x,z))
gsummary(mydataframe)

##illustrate gsummary.lm():
mymodel <- lm(y ~ x + z)
gsummary(mymodel)
gsummary(mymodel, vcov.type="robust")
gsummary(mymodel, vcov.type="hac")
gsummary(mymodel, confint.level=0.90)
gsummary(mymodel, confint.level=0.99)
gsummary(mymodel, confint.level=NULL)

##illustrate gsummary.glm():
y <- as.numeric( y > 0 )
mymodel <- glm(y ~ x + z, family=binomial)
gsummary(mymodel)
```

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