Package 'inference'

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Title Functions to extract inferential values of a fitted model object

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Description Collection of functions to extract inferential values
(point estimates, confidence intervals, p-values, etc) of a
fitted model object into a matrix-like object that can be used
for table/report generation; transform point estimates via the
delta method.

License GPL (>= 2)

Type Package

URL http://r-forge.r-project.org/projects/inference/

BugReports http://lists.r-forge.r-project.org/mailman/listinfo/inference-devel

Depends sandwich, methods

Collate 'inference.R'

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NeedsCompilation no

R topics documented:

1

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inference-package   *Extract inferential information from different statistical models.*

Description

Extract inferential information from different statistical models.

Details

This package provides functions to extract point estimates, standard errors, confidence intervals, p-values, and sample size from a fitted model in a matrix-like object. The purpose is to have all inferential numbers be readily accessible, especially in the construction of summary tables (R -> LaTeX -> html -> Word) for publication and collaboration.

Author(s)

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Examples

```
infer(lm(rnorm(100) ~ runif(100)))
```

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infer,-methods   *Inference for fitted model objects.*

Description

Inference for fitted model objects.

Usage

```
infer(fitobj, vars, robust.se=TRUE, two.sided=TRUE, ci.level=0.95, ...)
```

Arguments

fitobj	Fitted model object, such as those of class lm.
vars	Vector of variable names to obtain inference information for. If not specified, all variables in the fitted model will be used. in the fitted model.
robust.se	Boolean indicator for whether robust standard errors should be use. Defaults to TRUE.
two.sided	Boolean indicator for whether p-values should correspond to a two-sided test or one-sided. Defaults to TRUE.
ci.level	Confidence level. Defaults to 0.95.
...	Not used.

Details

Extract point estimates, standard errors, confidence intervals, p-values, and sample size.

Value

S4 [inference](#) object.

Author(s)

Vinh Nguyen

Examples

```
infer(lm(rnorm(100) ~ runif(100)))
```

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inference-class   *An S4 class that stores inferential values of a fitted model object.*

Description

An S4 class that stores inferential values of a fitted model object.

Details

An S4 class that inherits from the [matrix](#) class in the `methods` package; see `class?matrix`. Rows correspond to different coefficients and columns consist of point estimates (point.est), confidence intervals (ci.lo and ci.hi), p-values (p.value), and sample size (n).

Slots

.Data:

model: ([character](#)) String specifying class of model fit, such as "lm".

sample.size: ([numeric](#)) Sample size used in model fit.

robust.se: ([logical](#)) Boolean indicator whether robust standard errors were used.

two.sided: ([logical](#)) Boolean indicator whether p-values corresond to a two-sided test or one-sided.

ci.level: ([numeric](#)) Confidence level, e.g., 0.95.

scale: ([character](#)) Scale of point estimates; defaults to "beta".

others: ([list](#)) List containing other information about the model; eg, summary of cluster size for [gee](#) and [lme](#) objects; number of events for [coxph](#) objects.

Extends

[matrix](#)

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show,inference-method   *Show/print inference object.*

Description

Show/print inference object.

Arguments

object   inference object.

Details

show method for objects made using the infer function.

Value

Nothing.

Author(s)

Vinh Nguyen

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transform.inference   *Transformation of point estimates*

Description

transform method for class inference

Usage

```
transform.inference(`_data`, f, f.prime, ...)
```

Arguments

_data	Object of class inference.
f	Function to transform the point estimates and confidence intervals; e.g., exp.
f.prime	Derivative of f in order to compute the standard error of the transformed point estimates based on the delta method.
...	Nothing.

Details

Transform the point estimates, confidence intervals, and standard errors based on the delta method. This builds on the S3 generic function `transform` from the base package.

It can be used to get the hazard ratio scale in inference objects created from `coxph` objects and the odds ratio scale from logistic regression created from `glm` (both using f=exp, f.prime=exp).

Value

Object of class `inference`.

Author(s)

Vinh Nguyen

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