Package 'actools'

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Author Michael Mayer [aut, cre,	e, cph]	
Maintainer Michael Mayer <mayermichael79@gmail.com></mayermichael79@gmail.com>		
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coefTables Fro	rom lm object, extract nice coefficient tables	

Description

Title Tools for actuarial science

Version 1.0.0

Turns an lm object fitted on factors (with or without interactions) into coefficient tables.

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Usage

```
coefTables(object, rebase = FALSE)
```

Arguments

object An object of class lm.

rebase Logical flag indicating if the coefficient tables (and intercept) should be rebased

so that reference levels of factors are associated with coefficients 0.

Value

list of coefficient tables in long form.

Examples

```
CO2[["conc"]] <- factor(CO2[["conc"]])
fit <- lm(uptake ~ Type + Type:Treatment:conc, data = CO2)
coefTables(fit)
coefTables(fit, rebase = TRUE)</pre>
```

mae

Calculates mean absolute error

Description

Calculates mean absolute error from observed and predicted values.

Usage

```
mae(y, pred)
```

Arguments

y Vector of observed values.
pred Vector of predicted values.

Value

A numeric vector of length one.

Examples

```
mae(1:10, 2:11)
```

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perf Calculates different performance measures	
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Description

Calculates mean absolute error as well as certain proportions of predictions near observed values.

Usage

```
perf(y, pred, lab = "perf", q = c(0.01, 0.02, 0.05, 0.1))
```

Arguments

y Vector of observed values.
pred Vector of predicted values.
lab Label of the returned row.

q Vector of values forming the range.

Value

A data.frame with one row.

Examples

```
perf(1:10, (1:10)^2, q = c(1, 5, 100))
```

predict.coefTable

Predicted values based on coefTable object.

Description

Takes a data frame and replaces randomly part of the values by missing values.

Usage

```
## S3 method for class 'coefTable'
predict(object, newdata, trafo = I, ...)
```

Arguments

object Object of class coefTable.

newdata New data.

trafo Transformation to be applied to resulting predictions, e.g. exp.

... Further arguments passed to trafo.

Value

Vector of predictions.

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Examples

```
CO2[["conc"]] <- factor(CO2[["conc"]])
fit <- lm(uptake ~ Type:Treatment + conc:Treatment + Type:conc, data = CO2)
coefT <- coefTables(fit, rebase = TRUE)
predict(fit, head(CO2))
predict(coefT, head(CO2))</pre>
```

propWithin

Calculates proportion of predictions within range of observed values

Description

Calculates proportion of predictions within range of observed values.

Usage

```
propWithin(y, pred, q = c(0.01, 0.02, 0.05, 0.1))
```

Arguments

y Vector of observed values.
pred Vector of predicted values.

q Vector of values forming the range.

Value

A numeric vector of the same length as q.

Examples

```
propWithin(1:10, (1:10)^2, q = c(1, 5, 100))
```

rmse

Calculates root mean squared error of prediction

Description

Calculates root mean squared error from observed and predicted values.

Usage

```
rmse(y, pred)
```

Arguments

y Vector of observed values.
pred Vector of predicted values.

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Value

A numeric vector of length one.

Examples

rmse(1:10, 2:11)

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