Package 'translate.logit'

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Type Package

Title Translation of Logit Regression Coefficients into Percentages

Version 1.0

Imports nleqslv, nnet

Description Translation of logit models coefficients into percentages, following Deauvieau (2010) <doi:10.1177/0759106309352586>.

License GPL (>= 2)

Encoding UTF-8

LazyData true

NeedsCompilation no

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R topics documented:

`Music` *Music (data)*

Description

The data concerns tastes for music of a set of 500 individuals. It contains 5 variables of likes for music genres (french pop, rap, rock, jazz and classical), 2 about music listening and 2 additional variables (gender and age).

Usage

```
data(Music)
```

Format

A data frame with 500 observations and the following 7 variables:

`FrenchPop` is a factor with levels `No`, `Yes`, `NA`

`Rap` is a factor with levels `No`, `Yes`, `NA`

`Rock` is a factor with levels `No`, `Yes`, `NA`

`Jazz` is a factor with levels `No`, `Yes`, `NA`

`Classical` is a factor with levels `No`, `Yes`, `NA`

`Gender` is a factor with levels `Men`, `Women`

`Age` is a factor with levels `15-24`, `25-49`, `50+`

`OnlyMus` is a factor with levels `Daily`, `Often`, `Rare`, `Never`, indicating how often one only listens to music.

`Daily` is a factor with levels `No`, `Yes` indicating if one listens to music every day.

Details

'NA' stands for 'not available'

Examples

```
data(Music)
str(Music)
```

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translate.logit *Translates logit regression coefficients into percentages*

Description

Performs a logit regression and then computes the effects of covariates expressed in percentages (through two methods: 'pure' effects and 'experimental' effects; see Deauvieau, 2010)

Usage

```
translate.logit(formula,data,nit=0)
```

Arguments

`formula`	an object of class `formula` (or one that can be coerced to that class): a symbolic description of the model to be fitted.
`data`	a data frame containing the variables in the model. Every variables have to be factors.
`nit`	number of bootstrap iterations for confidence interval computation. Default is 0, i.e. no confidence interval is computed.

Details

This function works with binomial as well as multinomial regression models. If the dependent variable has two factors, `glm` is used ; if it has more than two factors `multinom` function (from `nnet` package) is used.

The function expresses the regression coefficients as percentages through three distinct methods: raw percentages, 'pure effects' percentages and 'experimental effects' percentages (see Deauvieau, 2010).

Bootstrap confidence interval are available only for binomial regressions.

Value

The function returns a list:

`glm`	An object of class `glm` or `nnet` (depending on the number of factors of the dependent variable)
`summary`	The results of `summary` function applied to `reg` element
`percents`	A matrix or a list of matrices (depending on the number of factors of the dependent variable) with regression coefficients expressed as percentages
`boot.ci`	A matrix or a list of matrices (depending on the number of factors of the dependent variable) with confidence intervals computed with bootstrap

Author(s)

Nicolas Robette

References

Deauvieau, J. (2010), 'Comment traduire sous forme de probabilites les resultats d'une modelisation logit ?', *Bulletin of Sociological Methodology / Bulletin de Methodologie Sociologique* 105(1), 5-23.

Deauvieau, J. (2011), 'Est-il possible et souhaitable traduire sous forme de probabilites un coefficient logit ? Reponse aux remarques formulees par Marion Selz a propos de mon article paru dans le BMS en 2010', *Bulletin of Sociological Methodology / Bulletin de Methodologie Sociologique* 112(1), 32-42.

Deauvieau, J. (2019), 'Comparer les resultats d'un modele logit dichotomique ou polytomique entre plusieurs groupes a partir des probabilites estimees', *Bulletin of Sociological Methodology / Bulletin de Methodologie Sociologique* 142(1), 7-31.

See Also

`glm`, `multinom`

Examples

```
## An example for binomial logit regression
data(Music)
translate.logit(Daily ~ Gender + Age, Music)
```

```
## An example for multinomial logit regression
translate.logit(OnlyMus ~ Gender + Age, Music)
```

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