

Package: mlogitExtras (via r-universe)

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Type Package

Title Some extras for the mlogit package

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Description Some extras for the mlogit package. I started this package because I could not make the predict function in mlogit robustly work without errors for mixed logit models. The function ml_predict can be used as a replacement (but still only works for a subset of random parameter specifications.)

License GPL >= 2.0

Encoding UTF-8

LazyData true

Depends mlogit, randtoolbox, restorepoint

RoxygenNote 7.1.1

Repository <https://skranz.r-universe.dev>

RemoteUrl <https://github.com/skranz/mlogitExtras>

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dtri	<i>Density function of triangular distribution</i>
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Description

Density function of triangular distribution

Usage

```
dtri(x, min = 0, max = 1)
```

ml_chol	<i>Extract Cholesky decomposition matrix of correlated random variables of an mlogit model</i>
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Description

Extract Cholesky decomposition matrix of correlated random variables of an mlogit model

Usage

```
ml_chol(mod)
```

ml_draw_betas	<i>Draw random coefficients of individuals for an estimated mixed logit model</i>
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Description

Note that the function is still restricted and does not yet work for all sorts of random parameter distributions that mlogit supports.

Usage

```
ml_draw_betas(mod, num.draws = 100, use.halton = FALSE, scale = NA)
```

Arguments

mod	the estimated models
num.draws	the number of individuals for which random coefficients shall be drawn
use.halton	shall Halton sequences be used instead of pseudo-random numbers?

Value

A matrix with num.draws rows and one column for each explanatory variable that has random coefficients

ml_predict	<i>Alternative predict function for mlogit objects</i>
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Description

Currently only works for models without alternative specific constants or alternative specific interaction effects.

Usage

```
ml_predict(mod, newdata, num.draws = 1000, use.halton = TRUE)
```

Arguments

mod	An estimated mlogit model
newdata	A data set for the prediction in long format. The data set should have a column alt the indexed the alternative. The data set must be ordered first by choice situation and each choice situation must have the same number of alternatives in the same order. You may simply add a column chid specifying choice situation then arrange by chid, alt.
num.draws	Number of simulated consumers to compute market shares (relevant for mixed logit models only)
use.halton	Should Halton sequences instead of pseudo-random numbers be used to simulate consumers (default TRUE)

Value

A matrix of predicted choice probabilities with one row per choice situation and one column for each alternative. Each row sums up to 1.

ml_tidy	<i>Get tidy output of estimated coefficients of mlogit model as data frame</i>
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Description

Get tidy output of estimated coefficients of mlogit model as data frame

Usage

```
ml_tidy(mod, scale = NA)
```

Arguments

mod	the estimated model
scale	A numeric value or variable name used to scale coefficients and standard errors. Typical application would be a "price" variable if you estimated a product choice. Then utilities can be interpreted as willingness to pay.

qtri	<i>Quantile function of triangular distribution</i>
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Description

Quantile function of triangular distribution

Usage

```
qtri(p, min = 0, max = 1)
```

show_P_changes	<i>Helper function to show changes in choice probabilities / market shares</i>
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Description

Helper function to show changes in choice probabilities / market shares

Usage

```
show_P_changes(org, new, digits = 1)
```

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