Package 'CHmGLMM'

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Type Package

Title Pairwise likelihood methods for multivariate GLMM using CLIC Heuristic methods

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Description Pairwise likelihood methods for multivariate generalized linear mixed models using CLIC heuristic methods

Depends R (>= 3.0.1),lme4,xtable

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LazyData true

RoxygenNote 5.0.1

R topics documented:

`aveThetas2` *Computes the AVE, DWAVE, WAVE, CH-EXP and CH-ECDF methods for multivariate GLMMs (m-GLMMs)*

Description

It acts on the Models structure for all pairs of items and returns the estimates for the m-GLMM parameters with 5 different methods

Usage

```
aveThetas2(Models, ModelsOne, Data, GHk = 5, n, Q, extraParam, extraParamOne,
  m = 1)
```

Arguments

Models	A list which contains the lme4 model objects taken from the pairwise separate estimations (list of size Q*(Q-1)/2)
ModelsOne	A list which contains the lme4 model objects taken from the univariate separate estimations (list of size Q)
Data	a data.frame with the data. 1st column id, 2nd column time, remaining Q columns are the y 0/1 values (Q items)
GHk	Number of Gauss-Hermite points per dimension of integration
n	number of individuals
Q	the number of items. Set this to four.
extraParam	a helper list which depends on pairwise estimates
extraParamOne	a helper list which depends on univariate estimates
m	an integer which is useful for subsequent runs

Value

The estimated parameters of the model with methods AVE, DWAVE, WAVE, CH-EXP and CH-ECDF

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demoExample2 *A Demo Example of the CHmGLMM package*

Description

It sets up an estimation problem, and performs the estimation with methods AVE, DWAVE, WAVE, CH-EXP and CH-ECDF

Usage

```
demoExample2()
```

Value

Returns the demo example output. It runs as a script with no input.

estimateModelFit2 *Estimates the modelFit*

Description

It acts on the Data data.frame, on the number of items Q and on the number of individuals

Usage

```
estimateModelFit2(Data, Q, n)
```

Arguments

Data	a data.frame with the data. 1st column id, 2nd column time, remaining Q columns are the y 0/1 values (Q items)
Q	the number of items. Set this to four.
n	number of individuals

Value

Returns the model fitted

generateData2 *Generates the Data*

Description

It acts on the primitives of the estimation problem and returns the Data

Usage

```
generateData2(id, times, n, X, Z, betas, b, Q)
```

Arguments

id	individual number
times	one-dimensional array of time points
n	number of individuals
X	fixed effects design matrix. Usually includes an intercept and time.
Z	random effects design matrix. Usually includes an intercept and time
betas	the fixed effects parameters for the intercept and the slope.
b	the random effects taken from a multivariate normal with mean 0 and variance matrix D
Q	the number of items. Set this to four.

Value

Returns the generated Data as data.frame

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