

Package ‘miRecSurv’

September 25, 2020

Type Package

Title Left-Censored Recurrent Events Survival Models

Version 0.0.1

Maintainer David Moríña <dmorina@ub.edu>

Description Fitting recurrent events survival models for
left-censored data with multiple imputation of the number of previous episodes.
See Hernández-Herrera G, Moríña D, Navarro A. (2020) <arXiv:2007.15031>.

Depends R (>= 3.5.0), COMPoissonReg, matrixStats, survival, stringi

License GPL (>= 2)

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LazyData true

NeedsCompilation no

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miRecSurv-package *Left-Censored Recurrent Events Survival Models*

Description

Fitting recurrent events survival models for left-censored data with multiple imputation of the number of previous episodes. See Hernández-Herrera, G, Moríña, D and Navarro, A (2020) <arXiv:2007.15031>.

Details

Package: miRecSurv
Type: Package
Version: 0.0.1
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LazyLoad: yes

Author(s)

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See Also

[recEvFit](#)

Examples

```
data(sim.data)
fit <- recEvFit(Surv(start2, stop2, status)~x+x.1+x.2, data=sim.data,
               id="nid", prevEp = "obs.episode",
               riskBef = "risk.bef", oldInd = "old", frailty=FALSE, m=5)
fit[[2]]      ### Fit summary table
head(fit[[1]]) ### Data with imputed number of previous episodes
```

recEvFit *Left-censored recurrent events survival models*

Description

The function allows the user to fit recurrent events survival models .

Usage

```
recEvFit(formula, data, id, prevEp, riskBef, oldInd,
         frailty=FALSE, m=5, seed=NA)
```

Arguments

formula	a formula object, with the response on the left of a <code>~</code> operator, and the terms on the right. The response must be a survival object as returned by the <code>Surv</code> function.
data	a <code>data.frame</code> in which to interpret the variables named in the formula.
id	subject identifier.
prevEp	known previous episodes.
riskBef	indicator for new individual in the cohort (<code>riskBef==FALSE</code>) or subject who was at risk before the start of follow-up (<code>riskBef==TRUE</code>).
oldInd	time an individual has been at risk prior to the follow-up.
frailty	should the model include a frailty term. Defaults to <code>FALSE</code> .
m	number of multiple imputations. The default is <code>m=5</code> .
seed	an integer that is used as argument by the <code>set.seed</code> function for offsetting the random number generator. Default is to leave the random number generator alone.

Value

A list with two elements. The first element is the summary table of the fitted model and the second element of the list is the original `data.frame` with the columns corresponding to the multiple imputed values for the previous episodes.

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See Also

[miRecSurv-package](#)

Examples

```
data(sim.data)
fit <- recEvFit(Surv(start2, stop2, status)~x+x.1+x.2, data=sim.data,
              id="nid", prevEp = "obs.episode",
              riskBef = "risk.bef", oldInd = "old", frailty=FALSE, m=5)
fit[[2]] ### Fit summary table
head(fit[[1]]) ### Data with imputed number of previous episodes
```

`sim.data`*Simulated data set*

Description

This data corresponds to a recurrent events simulated cohort using the `survsim` package.

Usage

```
sim.data
```

Format

A `data.frame` with 668 rows and 17 columns.

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