Package 'DPH'

November 24, 2020

Title Discrete Proportional Hazards Models

Version 0.0.1.9000

Description Fit standard discrete proportional hazards (DPH) model and DPH models with mismeasured outcomes.

License GPL-3

Encoding UTF-8

LazyData true

Roxygen list(markdown = TRUE)

RoxygenNote 7.1.1

Depends R (>= 2.10)

Imports tibble

URL http://github.com/celehs/DPH

Suggests knitr,
rmarkdown,
testthat

VignetteBuilder knitr

R topics documented:

adph *Adjusted Discrete Proportional Hazards (ADPH) Model*

Description

Adjusted Discrete Proportional Hazards (ADPH) Model

Usage

```
adph(time, status, pred, sens, spec, sens_known = TRUE, spec_known = TRUE)
```

Arguments

time	a vector of discrete time (e.g. 1, 2, 3, ...)
status	a vector of event status (1 = observed, 0 = censored)
pred	a vector/matrix of predictors (e.g. biomarkers)
sens	sensitivity (a scalar or vector)
spec	specificity (a scalar or vector)
sens_known	indicator of whether sensitivity is known
spec_known	indicator of whether specificity if known

adph2 *Adjusted Discrete Proportional Hazards (ADPH) Model*

Description

Adjusted Discrete Proportional Hazards (ADPH) Model

Usage

```
adph2(time, status, pred, lambda0 = NULL, lambda0_s = NULL)
```

Arguments

time	a vector of discrete time (e.g. 1, 2, 3, ...)
status	a vector of event status (1 = observed, 0 = censored)
pred	a vector/matrix of predictors (e.g. biomarkers)
lambda0	baseline hazards
lambda0_s	...

adph2_loglik *ADPH2 Log-likelihood*

Description

ADPH2 Log-likelihood

Usage

```
adph2_loglik(beta, lambda0, lambda0_s, t0, d0, X)
```

Arguments

beta	regression coefficients
lambda0	baseline hazards
lambda0_s	...
t0	observed event time
d0	observed event indicator
X	baseline covaraites

adph_loglik *ADPH Log-likelihood*

Description

ADPH Log-likelihood

Usage

```
adph_loglik(beta, lambda0, sens, spec, t0, d0, X)
```

Arguments

beta	regression coefficients
lambda0	baseline hazards
sens	sensitivities
spec	specificities
t0	observed event time
d0	observed event indicator
X	baseline covaraites

dph *Standard Discrete Proportional Hazards Model*

Description

Standard Discrete Proportional Hazards Model

Usage

```
dph(time, status, pred)
```

Arguments

time	a vector of discrete time (e.g. 1, 2, 3, ...)
status	a vector of event status (1 = observed, 0 = censored)
pred	a vector/matrix of predictors (e.g. biomarkers)

sim_data *Simulated Data Example*

Description

Simulated Data Example

Usage

```
sim_data
```

Format

A data frame with 1000 rows and 4 variables:

time discrete time

status event status

pred1 first predictor

pred2 second predictor

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