Package 'R2Addhaz'

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Type Package

Title R2 Measure of Explained Variation under the Additive Hazards Model

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Description R^2 measure of explained variation under the semiparametric additive hazards model is estimated. The measure can be used as a measure of predictive capability and therefore it can be adopted in model selection process. Rava, D. and Xu, R. (2020) <arXiv:2003.09460>.

License GPL-2

Encoding UTF-8

LazyData true

RdMacros Rdpack

Imports ahaz, pracma, zoo, caTools, survival, Rdpack (>= 0.7)

NeedsCompilation no

Repository CRAN

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R topics documented:

R2addhaz *Estimate R^2 for additive hazards model*

Description

The function computes R^2 measure of explained variation under the semiparametric additive hazards model.

Usage

```
R2addhaz(data)
```

Arguments

data	a data.frame with survival data. The first column needs to be the censored failure time. The second column needs to be the event indicator, 1 if the event is observed, 0 if it is censored. The other columns are covariates.

Details

The semiparametric hazards model

$$\lambda(t|Z) = \lambda_0(t) + \beta Z$$

is fitted to the data. The R^2 measure of explained variation is then computed.

Value

R	R^2 measure of explained variation.

Author(s)

Denise Rava

References

Rava, D., Xu, R. "Explained Variation under the Additive Hazards Model", March 2020, arXiv:2003.09460

Examples

```
Z=runif(100,0,sqrt(3)) #generate covariates
u=runif(100,0,1)
t=-log(u)/as.vector((1+Z)) #generate failure time
status=rep(1,100) #censoring indicator
sd<-as.data.frame(cbind(t,status,Z)) #data frame of survival data
R2addhaz(sd)
```

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