Package ‘CondiS’

April 17, 2022

Type Package
Title Censored Data Imputation for Direct Modeling
Version 0.1.2
Description Impute the survival times for censored observations based on their conditional survival distributions derived from the Kaplan-Meier estimator. ‘CondiS’ can replace the censored observations with the best approximations from the statistical model, allowing for direct application of machine learning-based methods. When covariates are available, ‘CondiS’ is extended by incorporating the covariate information through machine learning-based regression modeling (‘CondiS_X’), which can further improve the imputed survival time.
License GPL-2
Encoding UTF-8
Depends R (>= 3.6)
Imports caret, survival, kernlab, purrr, tidyverse, survminer
NeedsCompilation no
Suggests rmarkdown, knitr
VignetteBuilder knitr
RoxygenNote 7.1.2
Author Yizhuo Wang [aut, cre] (<https://orcid.org/0000-0002-1870-0019>), Ziyi Li [aut], Xuelin Huang [aut], Christopher Flowers [ctb]
Maintainer Yizhuo Wang <ywang70@mdanderson.org>
Repository CRAN
Date/Publication 2022-04-17 03:12:29 UTC

R topics documented:

CondiS .................................................. 2
CondiS_X ............................................... 2

Index 3

1
CondiS

CondiS Function

Description
This function allows you to impute survival time.

Usage
CondiS(time, status, tmax)

Arguments
- **time**: The follow up time for right-censored data.
- **status**: The censoring indicator, normally 0=right censored, 1=event at time.
- **tmax**: A self-defined time-of-interest point; if left undefined, then it is defaulted as the maximum follow up time.

CondiS_X

CondiS-X Function

Description
This function allows you to improve the imputed survival time by incorporating covariate information.

Usage
CondiS_X(pred_time, status, covariates, method)

Arguments
- **pred_time**: The imputed follow up time for right-censored data.
- **status**: The censoring indicator, normally 0=right censored, 1=event at time.
- **covariates**: The additional patient data that is presumably associated with the survival time.
- **method**: Choose from 8 machine learning algorithms; the default is "glm".
Index

CondiS, 2
CondiS_X, 2