

Package ‘free’

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Type Package

Title Flexible Regularized Estimating Equations

Version 1.0.1

Date 2022-02-23

Description Unified regularized estimating equation solver. Currently the package includes one solver with the l1 penalty only. More solvers and penalties are under development. Reference: Yi Yang, Yuwen Gu, Yue Zhao, Jun Fan (2021) <[arXiv:2110.11074](#)>.

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Imports Rcpp (>= 1.0.7)

LinkingTo Rcpp, RcppArmadillo

Encoding UTF-8

RoxygenNote 7.1.2

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation yes

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free-package	<i>Flexible Regularized Estimating Equations</i>
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Description

Unified regularized estimating equation solver. Currently include one solver with the l1 penalty only. More solvers and penalties are under development.

free_lasso	<i>Main solver of free</i>
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Description

Main solver of free

Usage

```
free_lasso(
  p,
  lambda,
  est_func,
  par_init,
  alpha,
  tau,
  maxit = 1000L,
  tol_ee = 1e-06,
  tol_par = 1e-06,
  verbose = FALSE
)
```

Arguments

p	The dimension of the dataset
lambda	Lasso regularization coefficient
est_func	R function, the estimating function specified by the user
par_init	Optional, initial value for parameter update
alpha	Tuning parameter
tau	Tuning parameter
maxit	Maximum iterations
tol_ee	Convergence criterion based on the update of the estimating function
tol_par	Convergence criterion based on the update of the parameter
verbose	logical, print updates

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