

Package ‘free’

May 8, 2026

Type Package

Title Flexible Regularized Estimating Equations

Version 1.0.2

Date 2024-05-22

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) <[doi:10.48550/arXiv.2110.11074](https://doi.org/10.48550/arXiv.2110.11074)>.

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Imports Rcpp (>= 1.0.7)

LinkingTo Rcpp, RcppArmadillo

Encoding UTF-8

RoxygenNote 7.3.1

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation yes

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Repository CRAN

Date/Publication 2024-05-24 04:00:02 UTC

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`free_lasso`*Main solver of free*

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

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

Value

A list containing the regularized estimating equation estimates and the number of iterations it takes to converge.

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