Package: fRLR (via r-universe)

October 23, 2026

Type Package

Title Fit Repeated Linear Regressions

SystemRequirements GNU Scientific Library (GSL). Note: users should have GSL installed.

Version 1.3.0

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Description When fitting a set of linear regressions which have some same variables, we can separate the matrix and reduce the computation cost. This package aims to fit a set of repeated linear regressions faster. More details can be found in this blog Lijun Wang (2017) <https://stats.hohoweiya.xyz/regression/2017/09/26/An-R-Package-Fit-Repeated-Linear-Regressions/>.

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URL https://github.com/szcf-weiya/fRLR, https://stats.hohoweiya.xyz/regression/2017/09/26/An-R-Package-Fit-Repeated-Linear-Regressions/

Imports Rcpp (>= 0.12.12)

LinkingTo Rcpp

RoxygenNote 7.2.3

Encoding UTF-8

Suggests knitr, rmarkdown, testthat (>= 3.0.0)

VignetteBuilder knitr

Config/testthat/edition 3

NeedsCompilation yes

Config/pak/sysreqs libgsl0-dev

Repository https://cran.r-universe.dev

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RemoteUrl https://github.com/cran/fRLR

RemoteRef HEAD

RemoteSha 726510b77136250e4990db7f38512d1807b17d70

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`frlr1` *Fit Repeated Linear Regressions with One Variable*

Description

Fit a set of linear regressions which differ only in one variable.

Usage

```
frlr1(R_X, R_Y, R_COV, num_threads = -1L)
```

Arguments

`R_X`	the observation matrix
`R_Y`	the response
`R_COV`	common variables
`num_threads`	number of threads for openmp. If it is -1 (default), it will use all possible threads.

Value

the fitting results for each regression.

Examples

```
set.seed(123)
X = matrix(rnorm(50), 10, 5)
Y = rnorm(10)
COV = matrix(rnorm(40), 10, 4)
frlr1(X, Y, COV)
```

frlr2 *Fit Repeated Linear Regressions with Two Variables*

Description

Fit a set of linear regressions which differ only in two variables.

Usage

```
frlr2(R_X, R_idx1, R_idx2, R_Y, R_COV, num_threads = -1L)
```

Arguments

R_X	the observation matrix
R_idx1	the first identical feature
R_idx2	the second identical feature
R_Y	the response variable
R_COV	common variables
num_threads	number of threads for openmp. If it is -1 (default), it will use all possible threads.

Value

the fitting results for each regression.

Examples

```
set.seed(123)
X = matrix(rnorm(50), 10, 5)
Y = rnorm(10)
COV = matrix(rnorm(40), 10, 4)
idx1 = c(1, 2, 3, 4, 1, 1, 1, 2, 2, 3)
idx2 = c(2, 3, 4, 5, 3, 4, 5, 4, 5, 5)
frlr2(X, idx1, idx2, Y, COV)
```

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