Package 'elasso'

October 13, 2022

Title Enhanced Least Absolute Shrinkage and Selection Operator
Regression Model

Version 1.1

Author Pi Guo

Maintainer Pi Guo <guopi.01@163.com>

Description Performs some enhanced variable selection algorithms
based on the least absolute shrinkage and selection operator for regression model.

Depends R (>= 3.0.2),glmnet,SiZer,datasets

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LazyData true

NeedsCompilation no

Repository CRAN

Date/Publication 2015-10-06 14:04:20

R topics documented:

BRLasso   *Bootstrap ranking LASSO model.*

Description

This function performs a LASSO logistic regression model using a bootstrap ranking procedure.

Usage

```
BRLasso(x, y, B = 5, Boots = 100, kfold = 10)
```

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Arguments

x	the predictor matrix
y	the response variable, a factor object with values of 0 and 1
B	the external loop for intersection operation, with the default value 5
Boots	the internal loop for bootstrap sampling, with the default value 100
kfold	the K-fold cross validation, with the default value 10

References

Guo, P., Zeng, F., Hu, X., Zhang, D., Zhu, S., Deng, Y., & Hao, Y. (2015). Improved Variable Selection Algorithm Using a LASSO-Type Penalty, with an Application to Assessing Hepatitis B Infection Relevant Factors in Community Residents. PLoS One, 27;10(7):e0134151.

Examples

```
library(datasets)
head(iris)
X <- as.matrix(subset(iris,iris$Species!="setosa")[,-5])
Y <- as.factor(ifelse(subset(iris,iris$Species!="setosa")[,5]=='versicolor',0,1))
# Fitting a bootstrap ranking LASSO (BRLASSO) logistic regression model
BRLasso.fit <- BRLasso(x=X, y=Y, B=2, Boots=10, kfold=10)
# Variables selected by the BRLASSO model
BRLasso.fit$var.selected
# Coefficients of the selected variables
BRLasso.fit$var.coef
```

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