Package 'pros'

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Title Penalized Regression on Steoroids

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Description This is a project for STAT8053 at the University of Minnesota.

Depends R (>= 3.5.1)

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Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

R topics documented:

`cv.pros` *Cross Validation*

Description

The K-fold cross-validation function

Usage

```
cv.pros(X, y, K_fold, alpha, lambdas, algorithm = "proximal_gradient_cd")
```

Arguments

X	the data matrix
y	the response vector
K_fold	partition size
alpha	convex combination
lambdas	A vector of Lagrangian penalization values to be evaluated
algorithm	the optimization algorithm

Value

A class cv_pros with

- best_lambda the best lambda.
- lambdas the lambda values
- risks the cross-validation risks

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predict.cv_pros *CV Prediction*

Description

The Prediction function

Usage

```
## S3 method for class 'cv_pros'
predict(cv_prosObj, X_new)
```

Arguments

cv_prosObj	an object of class cv_pros
X_new	the data matrix

Value

A vector of predictions

predict.pros *Prediction*

Description

The Prediction function

Usage

```
## S3 method for class 'pros'
predict(prosObj, X)
```

Arguments

prosObj	an object of class pros
X	the data matrix

Value

A vector of predictions

pros *Fit*

Description

The fit function for a specific lambda value

Usage

```
pros(X, y, alpha, lambda, algorithm = "proximal_gradient_cd")
```

Arguments

X	the data matrix
y	the response vector response
alpha	convex combination
lambda	The Lagrangian penalization value
algorithm	the optimization algorithm

Value

A class pros with

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