

Package ‘rotationForest’

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Type Package

Title Fit and Deploy Rotation Forest Models

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Imports rpart

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Description Fit and deploy rotation forest models (``Rodriguez, J.J., Kuncheva, L.I., 2006. Rotation forest: A new classifier ensemble method. IEEE Trans. Pattern Anal. Mach. Intell. 28, 1619-1630 <doi:10.1109/TPAMI.2006.211>") for binary classification. Rotation forest is an ensemble method where each base classifier (tree) is fit on the principal components of the variables of random partitions of the feature set.

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`predict.rotationForest`*Predict method for rotationForest objects*

Description

Prediction of new data using rotationForest.

Usage

```
## S3 method for class 'rotationForest'  
predict(object, newdata, all = FALSE, ...)
```

Arguments

<code>object</code>	An object of class rotationForest
<code>newdata</code>	A data frame with the same predictors as in the training data.
<code>all</code>	Return the predictions per tree instead of the average.
<code>...</code>	Not used currently.

Value

A vector containing the response scores.

Author(s)

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References

Rodriguez, J.J., Kuncheva, L.I., 2006. Rotation forest: A new classifier ensemble method. IEEE Trans. Pattern Anal. Mach. Intell. 28, 1619-1630. doi:10.1109/TPAMI.2006.211

See Also

[rotationForest](#)

Examples

```
data(iris)  
y <- as.factor(ifelse(iris$Species[1:100]=="setosa",0,1))  
x <- iris[1:100,-5]  
rF <- rotationForest(x,y)  
predict(object=rF,newdata=x)
```

rotationForest	<i>Binary classification with Rotation Forest (Rodriguez en Kuncheva, 2006)</i>
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Description

rotationForest implements an ensemble method where each base classifier (tree) is fit on the principal components of the variables of random partitions of the feature set.

Usage

```
rotationForest(x, y, K = round(ncol(x)/3, 0), L = 10, verbose = FALSE,
  ...)
```

Arguments

x	A data frame of predictors (numeric, or integer). Categorical variables need to be transformed to indicator (dummy) variables. At minimum x requires two columns.
y	A factor containing the response vector. Only {0,1} is allowed.
K	The number of variable subsets. The default is the value K that results in three features per subset.
L	The number of base classifiers (trees using the rpart package). The default is 10.
verbose	Boolean. Should information about the subsets be printed?
...	Arguments to rpart.control. First run library(rpart).

Value

An object of class rotationForest, which is a list with the following elements:

models	A list of trees.
loadings	A list of loadings.
columnnames	Column names of x.

Author(s)

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References

Rodriguez, J.J., Kuncheva, L.I., 2006. Rotation forest: A new classifier ensemble method. IEEE Trans. Pattern Anal. Mach. Intell. 28, 1619-1630. doi:10.1109/TPAMI.2006.211

See Also

[predict.rotationForest](#)

Examples

```
data(iris)
y <- as.factor(ifelse(iris$Species[1:100]=="setosa",0,1))
x <- iris[1:100,-5]
rF <- rotationForest(x,y)
predict(object=rF,newdata=x)
```

rotationForestNews *Display the NEWS file*

Description

rotationForestNews shows the NEWS file of the rotationForest package.

Usage

```
rotationForestNews()
```

Author(s)

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Examples

```
rotationForestNews()
```

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*Topic **classification**

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