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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RoxygenNote 6.0.1

NeedsCompilation no

Repository CRAN

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Contents

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

object	An object of class rotationForest
newdata	A data frame with the same predictors as in the training data.
all	Return the predictions per tree instead of the average.
...	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` *Binary classification with Rotation Forest (Rodriguez en Kuncheva, 2006)*

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()
```

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Examples

```
rotationForestNews()
```

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