Package 'RFinfer'

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Type Package

Title Inference for Random Forests

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Description A set of add on tools for the randomForest package

Depends R (>= 3.1.2),
randomForest

Imports Matrix,
party,
pbapply

License GPL

LazyData TRUE

RoxygenNote 5.0.1

R topics documented:

`rfPredVar` *rfPredVar*

Description

Generate predictions and prediction variances from a random forest based on the infinitesimal jackknife.

Usage

```
rfPredVar(random.forest, rf.data, pred.data = rf.data, CI = FALSE,
  tree.type = c("rf", "ci"), prog.bar = FALSE)
```

Arguments

random.forest	A random forest trained with keep.inbag=TRUE. See details for more information.
rf.data	The data used to train rf
pred.data	The data used to predict with the forest; defaults to rf.data if not given
CI	Should 95% confidence intervals based on the CLT be returned along with predictions and prediction variances?
tree.type	either 'ci' for conditional inference tree or 'rf' for traditional CART tree
prog.bar	should progress bar be shown? (only applicable when tree.type='ci'

Details

The random forest trained with keep.inbag=TRUE is supplied only for the purpose of defining the resampling scheme. The function builds a new random forest based on the tree.type setting.

Note: This function does not use the default predict method for forests produced by cforest. The predictions here are the direct averages of all tree predictions, instead of using the observation weights. Therefore, predictions from this function will likely differ from predict.cforest when using subsampling.

This function currently only works with regression forests – not classification forests.

Value

A data frame with the predictions and prediction variances (and optionally 95% confidence interval)

Examples

```
library(randomForest)
data(airquality)
d <- na.omit(airquality)
rf <- randomForest(Ozone ~ .,data=d,keep.inbag=T,sampsize=30,replace=FALSE,ntree=500)
rfPredVar(rf,rf.data=d,CI=TRUE,tree.type='rf')
```

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