1 IRIS DATA

Table 1: OOB error for PP.bagging with bootstrap samples without strata and with strata

	aux	error	error.st
1	5.00000	0.01695	0.04237
2	10.00000	0.03008	0.03008
3	50.00000	0.02222	0.02222
4	100.00000	0.02222	0.01481
5	500.00000	0.02222	0.02222

Ussing PPtree with LDA the error is 0

```
library(PPtree)
Tree.result <- PP.Tree("LDA",iris[training,5],iris[training,1:4])
test <- iris[-training,]
res<-PP.classify(test[,1:4],test[,5],Tree.result,1)
print(res[[1]]/length(res[[2]]))

## [1] 0
```

Ussing the same data we run a random forest and the oob error is around 6%.

```
##
## Call:
##  randomForest(formula = Species ~ ., data = iris[training, ],      importance = TRUE, pro
##                Type of random forest: classification
##                      Number of trees: 500
## No. of variables tried at each split: 2
##
##         OOB estimate of  error rate: 5.93%
## Confusion matrix:
##            setosa versicolor virginica class.error
## setosa         45          0         0     0.00000
## versicolor      0         42         3     0.06667
## virginica       0          5        40     0.11111
```

2 OLIVE DATA

Table 2: OOB error for PP.bagging with bootstrap samples without strata and with strata

	aux	error	error.st
1	5.00000	0.05263	0.07918
2	10.00000	0.09309	0.12202
3	50.00000	0.14815	0.16138
4	100.00000	0.15344	0.14021
5	500.00000	0.07672	0.12169

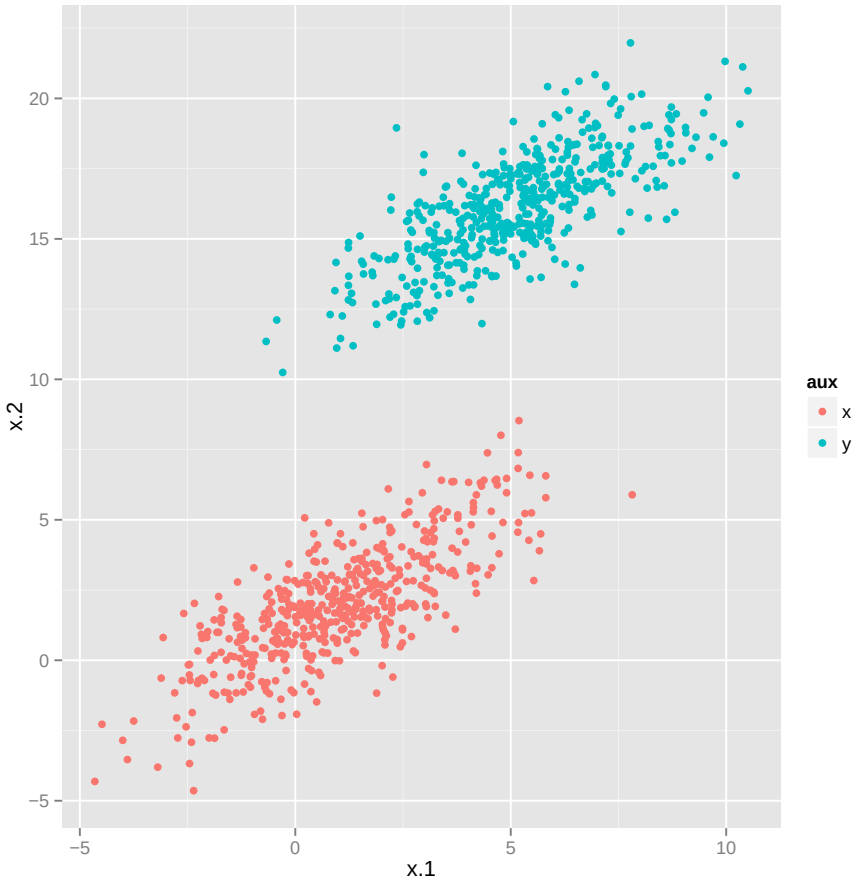
Using PPtree function I do not know why I have this big error?????

```
## [1] 0.2513
```

Using random forest the OOb error us 0%

```
##
## Call:
##  randomForest(formula = Region ~ ., data = d.olive2[training,      ], importance = TRUE,
##                Type of random forest: classification
##                      Number of trees: 500
## No. of variables tried at each split: 2
##
##         OOB estimate of  error rate: 0%
## Confusion matrix:
##     1  2 class.error
## 1 290  0           0
## 2   0 88           0
```

3 SIMULATE DATA



Zero error with the PPbagging

Table 3: OOB error for PP.bagging with bootstrap samples without strata and with strata

	aux	error	error.st
1	5.00000	0.00000	0.00000
2	10.00000	0.00000	0.00000
3	50.00000	0.00000	0.00000
4	100.00000	0.00000	0.00000
5	500.00000	0.00000	0.00000

Using PPtree also zero error

```
library(PPtree)
Tree.result <-  PP.Tree("PDA",dat.pl[training,1],dat.pl[training,2:3],lambda=1)



test <- dat.pl[-training,]
res<-PP.classify(dat.pl[training,2:3],dat.pl[training,1],Tree.result,1)
print(res[[1]]/length(res[[2]]))

## [1] 0
```

Zero error with Random Forest

```
##
## Call:
##  randomForest(formula = aux ~ ., data = dat.pl[training, ], importance = TRUE,      strat
##                Type of random forest: classification
##                      Number of trees: 500
## No. of variables tried at each split: 1
##
##         OOB estimate of  error rate: 0%
## Confusion matrix:
##     x   y class.error
## x 450   0           0
## y   0 450           0
```