```
> library(caret)
> data(iris)
> iris <- iris[-which(iris$Species=='setosa'),]
> y <- iris$Species
> plot(iris,pch=21,bg=iris$Species)
> set.seed(2)
> test_index <- createDataPartition(y,times=1,p=0.5,list=FALSE)
Warning message:
In createDataPartition(y, times = 1, p = 0.5, list = FALSE) :
  Some classes have no records ( setosa ) and these will be ignored
> test <- iris[test_index,]
> train <- iris[-test_index,]
> petalLengthRange <- seq(range(train$Petal.Length)[1],range(train$Petal.Length)[2],by=0.1)
> petalWidthRange <- seq(range(train$Petal.Width)[1],range(train$Petal.Width)[2],by=0.1)
> length_predictions <- sapply(petalLengthRange,function(i){
+ y_hat <- ifelse(train$Petal.Length>i,'virginica','versicolor')
+ mean(y_hat==train$Species)
+ })
> length_cutoff <- petalLengthRange[which.max(length_predictions)] # 4.7
>
> width_predictions <- sapply(petalWidthRange,function(i){
+ y_hat <- ifelse(train$Petal.Width>i,'virginica','versicolor')
+ mean(y_hat==train$Species)
+ })
> width_cutoff <- petalWidthRange[which.max(width_predictions)] # 1.5
>
> y_hat <- ifelse(test$Petal.Length>length_cutoff | test$Petal.Width>width_cutoff,'virginica','versicolor'
)
> mean(y_hat==test$Species)
[1] 0.88
>
```