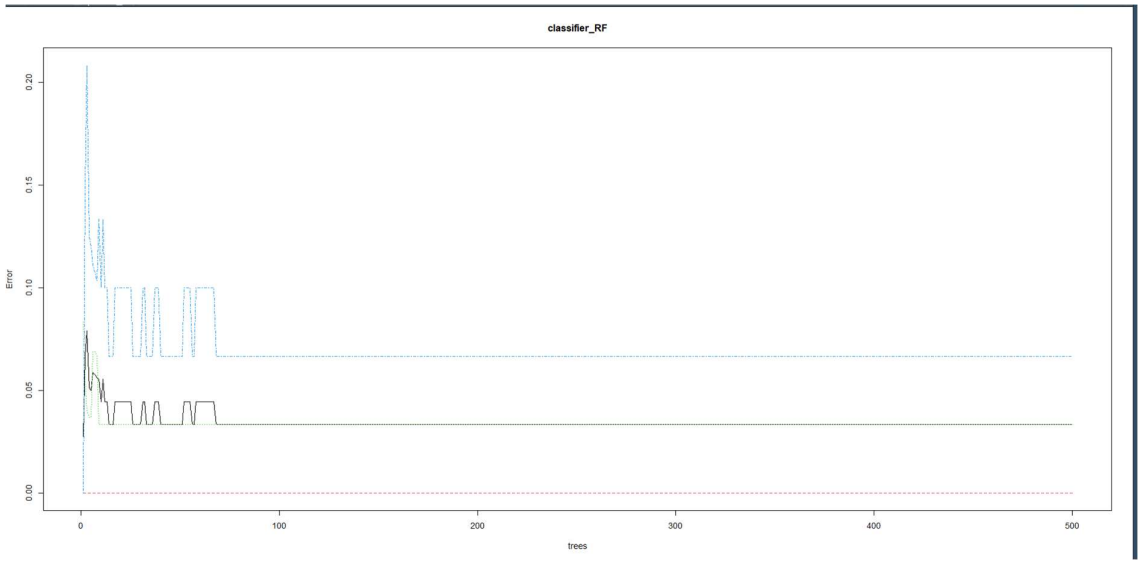
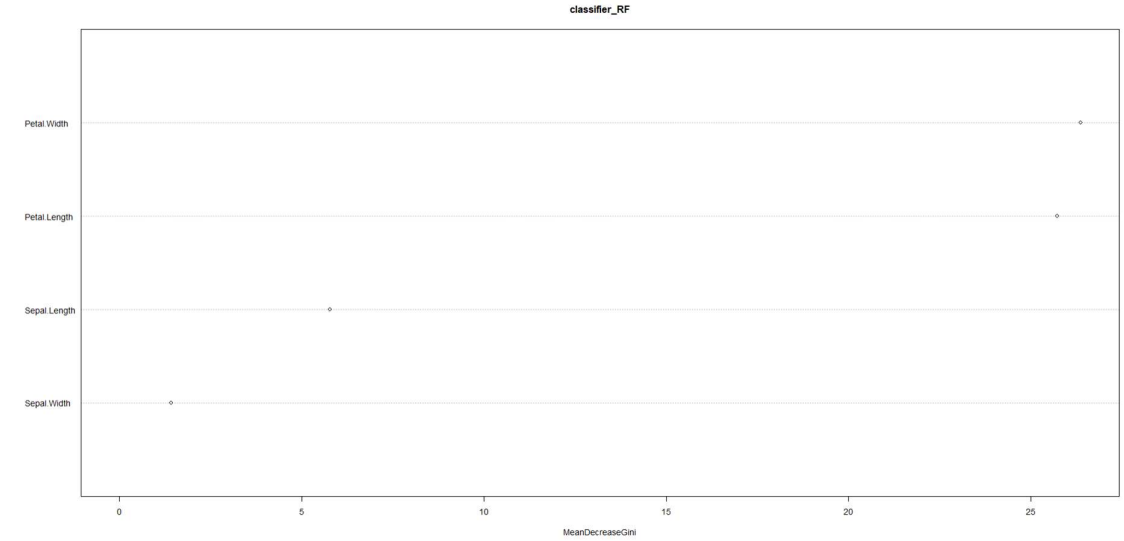
```
> # Loading data
> data(iris)
> # Structure
> str(iris)
'data.frame':   150 obs. of  5 variables:
 $ Sepal.Length: num  5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
 $ Sepal.Width : num  3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
 $ Petal.Length: num  1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
 $ Petal.Width : num  0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
 $ Species     : Factor w/ 3 levels "setosa","versicolor",..: 1 1 1 1 1 1 1 1 1 1 ...
> # Splitting data in train and test data
> split <- sample.split(iris, SplitRatio = 0.7)
> split
[1] FALSE  TRUE  TRUE FALSE  TRUE
> train <- subset(iris, split == "TRUE")
> test <- subset(iris, split == "FALSE")
> # Fitting Random Forest to the train dataset
> set.seed(120)  # Setting seed
> classifier_RF = randomForest(x = train[-5],
+                              y = train$Species,
+                              ntree = 500)
> classifier_RF

Call:
 randomForest(x = train[-5], y = train$Species, ntree = 500)
               Type of random forest: classification
                     Number of trees: 500
No. of variables tried at each split: 2

        OOB estimate of  error rate: 3.33%
Confusion matrix:
           setosa versicolor virginica class.error
setosa         30          0         0  0.00000000
versicolor      0         29         1  0.03333333
virginica       0          2        28  0.06666667
> # Predicting the Test set results
> y_pred = predict(classifier_RF, newdata = test[-5])
> # Confusion Matrix
> confusion_mtx = table(test[, 5], y_pred)
> confusion_mtx
            y_pred
             setosa versicolor virginica
  setosa         20          0         0
  versicolor      0         18         2
  virginica       0          0        20
> # Plotting model
> plot(classifier_RF)
> # Importance plot
> importance(classifier_RF)
             MeanDecreaseGini
Sepal.Length         5.772467
Sepal.Width          1.419426
Petal.Length        25.728012
Petal.Width         26.374384
> # Variable importance plot
> varImpPlot(classifier_RF)
>
```


classifier_RF
Error
0.00
0.05
0.10
0.15
0.20
0
100
200
300
400
500
trees


classifier_RF
Petal.Width
Petal.Length
Sepal.Length
Sepal.Width
0
5
10
15
20
25
MeanDecreaseGini