Build a random forest for the ‘iris’ data.

**Ans :**

**R Code :**

## Random Forest

########## Iris Data Set #########

install.packages("randomForest")

library(randomForest)

model<-randomForest(iris$Species~.,data=iris,ntree=1000)

# View the forest results.

print(model)

#Importance of the variable - Lower Gini

print(importance(model))

#Prediction

pred<- predict(model,iris[,-5])

table(pred,iris$Species)

**Results :**

> model<-randomForest(iris$Species~.,data=iris,ntree=1000)

> # View the forest results.

> print(model)

Call:

randomForest(formula = iris$Species ~ ., data = iris, ntree = 1000)

Type of random forest: classification

Number of trees: 1000

No. of variables tried at each split: 2

OOB estimate of error rate: 4.67%

Confusion matrix:

setosa versicolor virginica class.error

setosa 50 0 0 0.00

versicolor 0 47 3 0.06

virginica 0 4 46 0.08

> #Importance of the variable - Lower Gini

> print(importance(model))

MeanDecreaseGini

Sepal.Length 9.539619

Sepal.Width 2.333898

Petal.Length 43.082329

Petal.Width 44.263379

> #Prediction

> pred<- predict(model,iris[,-5])

> table(pred,iris$Species)

pred setosa versicolor virginica

setosa 50 0 0

versicolor 0 50 0

virginica 0 0 50

**Inference :**

Petal Width was found as the important feature as it was having the highest Index.