**Feature selection in R**

> attach(baru)

>str(baru)

> baru$class<-as.factor(baru$class)

>str(baru)

> library(Boruta)

> library(mlbench)

> library(caret)

> library(randomForest)

>set.seed(111)

> baruta<-Boruta(class~.,data=baru,doTrace=2)

> baruta<-Boruta(class~.,data=baru,doTrace=2,maxRuns=500)

> print(baruta)

> plot(baruta)

> plot(baruta,las=2,cex.axis=0.7)

> plotImpHistory(baruta)

#Tentative Fix

> bor<-TentativeRoughFix(baruta)

> print(bor)

> attStats(baruta)

> set.seed(222)

> ind<-sample(2,nrow(baru),replace = T,prob = c(0.6,0.4))

> train<-baru[ind==1,]

> test<-baru[ind==2,]

#Random Forest Model

> set.seed(333)

> rf88<-randomForest(class~.,data=train)

>rf88

#Prediction and Confusion matrix for 88 variables

> p<-predict(rf88,test)

>p

> confusionMatrix(p,test$class) # 67.74%

>baruta

> getNonRejectedFormula(baruta)

> set.seed(333)

> rf58<-randomForest(class~V2+V3+V5+V11+V12+V13+V14+V15+V20+V24+V25+V26+V27+V35+V36+V37+V39+V40+V41+V42+V43+V45+V46+V47+V49+V50+V51+V52+V53+V55+V57+V58+V59+V60+V66+V68+V70+V72+V73+V75+V79+V79+V82+V83+V84+V86+V87+V88, data=train)

> p1<-predict(rf58,test)

> confusionMatrix(p1,test$class)

> getConfirmedFormula(baruta)

> rf38<-randomForest(class~V2+V3+V5+V8+V11+V14+V15+V20+V24+V25+V26+V35+V37+V40+V41+V42+V43+V47+V49+V50+V52+V53+V55+V57+V58+V59+V60+V66+V68+V70+V72+V79+V83+V84+V86+V87+V88,data=train)

> p2<-predict(rf38,test)

> confusionMatrix(p2,test$class)