assignment 10

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rm(list=ls())

Importing the dataset

file <- file.choose() cancer <- read.csv(file)

delteting the first row

cancer1 = subset(cancer, select = -c(id))

Fasctorising the diagnoasis column

cancer1$diagnosis <- -factor(cancer$1diagnosis, levels = c('M','B'),labels = c(1,2))

Splitting the dataet into training and testing

index<-sort(sample(nrow(cancer),as.integer(.70*nrow(cancer)))) training<-cancer1[index,] testing<-cancer1[-index,]

Perfroming SVM

library(e1071) svm.model <- svm(diagnosis~ ., data =training) svm.pred <- predict(svm.model, testing)

Confusion matrix

conf_matrix <- table(predict_svm=svm.pred,class=testing$diagnosis) print(conf_matrix)

class

predict_svm 1 2

1 67 3

2 1 100

Accuracy

accuracy <- function(x){sum(diag(x)/(sum(rowSums(x)))) * 100} accuracy(conf_matrix)

Accuracy = 97.66082