**CSE – 6005 – Machine Learning**

**Lab Experiment – 07 - Implementionof the Adaboost algorithm and experiment with particular dataset**

CODE:

library(adabag);

adadata<-read.csv('G:/WebSiteProjects/CART/bank-full.csv',

header=TRUE,sep=";")

adaboost<-boosting(y~age+job+marital+education+default+balance+

housing+loan+contact+day+month+duration+campaign+pdays+previous+

poutcome, data=adadata, boos=TRUE, mfinal=20,coeflearn='Breiman')

summary(adaboost)

adaboost$trees

adaboost$weights

adaboost$importance

errorevol(adaboost,adadata)

predict(adaboost,adadata)

t1<-adaboost$trees[[1]]

library(tree)

plot(t1)

text(t1,pretty=0)

OUTPUT:

> summary(adaboost)

Length Class Mode

formula 3 formula call

trees 20 -none- list

weights 20 -none- numeric

votes 90422 -none- numeric

prob 90422 -none- numeric

class 45211 -none- character

importance 16 -none- numeric

terms 3 terms call

call 6 -none- call

> adaboost$trees

[[1]]

n= 45211

> adaboost$weights

[1] 1.10380711 0.77472389 0.52019685 0.44438013 0.38127144 0.27964307 0.28045327

[8] 0.28845466 0.21687149 0.17652101 0.21293545 0.15761912 0.14610840 0.10340854

[15] 0.08215729 0.07135600 0.09845528 0.08283331 0.14270740 0.11726949

> adaboost$importance

age balance campaign contact day default duration education

0.8915471 0.6527303 0.3314809 9.2944226 2.2618872 0.0000000 52.9596682 0.1294570

housing job loan marital month pdays poutcome previous

3.0926495 0.4588090 0.3539362 0.1003799 20.1251447 1.4221128 7.7787189 0.1470556

> errorevol(adaboost,adadata)

$error

[1] 0.09906881 0.09906881 0.10307226 0.09756475 0.10083829 0.09820619 0.09895822

[8] 0.09650306 0.09650306 0.09619340 0.09557409 0.09610493 0.09493265 0.09515383

[15] 0.09504324 0.09526443 0.09475570 0.09493265 0.09398155 0.09460087

attr(,"class")

[1] "errorevol"

> predict(adaboost,adadata)

> t1<-adaboost$trees[[1]]

> library(tree)

> plot(t1)

> text(t1,pretty=0)



