library(e1071)

library(caTools)

library(caret)

library(haven)

library(gmodels)

library(bayesrules)

library(dplyr)

library(misty)

BookG <- read\_sav("NB.sav")

BookG=data.frame(BookG)

BookG$DILEMADIRECT=as.factor(BookG$DILEMADIRECT)

split <- sample.split(BookG , SplitRatio = 0.8)

train\_data <- subset(BookG, split == "TRUE")

test\_data <- subset(BookG, split == "FALSE")

train\_scale <- scale(train\_data[, 1:2])

test\_scale <- scale(test\_data[, 1:2])

classifier\_naive <- naiveBayes(DILEMADIRECT~ ., data = train\_data, trControl=trainControl(method='cv',number=10))

classifier\_naive

summary(classifier\_naive)

y\_pred <- predict(classifier\_naive, newdata = test\_data)

test\_label = test\_data[,3]

CrossTable(x=test\_label, y=y\_pred )

conf\_mat <- table(test\_data$DILEMADIRECT,y\_pred)

print(conf\_mat)

confusionMatrix(conf\_mat)

ggplot(BookG, aes(x =E, fill = DILEMADIRECT)) +

geom\_density(alpha = 1.7) + geom\_vline(xintercept = 5, linetype = "dashed")

ggplot(BookG, aes(x =I, fill = DILEMADIRECT)) +

geom\_density(alpha = 1.7)+geom\_vline(xintercept = 80, linetype = "dashed")

ggplot(BookG,aes(x = E, y = I,color=DILEMADIRECT)) + geom\_point()

Dilema <- data.frame(E = 8, I = 55)

predict(classifier\_naive, newdata = Dilema, type = "raw")

predict(classifier\_naive, newdata = Dilema)

cv\_model <- naive\_classification\_summary\_cv(

model = classifier\_naive, data = BookG, y = "DILEMADIRECT", k = 10)

cv\_model$cv

#Tuning