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ASSIGNMENT 04

Code:

# Installing the package

install.packages("dplyr")

# Loading package

library(dplyr)

# Summary of dataset in package

summary(mtcars)

install.packages("caTools")

install.packages("ROCR")

library(caTools)

library(ROCR)

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

split

train\_reg <- subset(mtcars, split == "TRUE")

test\_reg <- subset(mtcars, split == "FALSE")

logistic\_model <- glm(vs ~ wt + disp, data = train\_reg,family = "binomial")

logistic\_model

summary(logistic\_model)

predict\_reg <- predict(logistic\_model, test\_reg, type = "response")

predict\_reg

predict\_reg <- ifelse(predict\_reg >0.5, 1, 0)

table(test\_reg$vs, predict\_reg)

missing\_classerr <- mean(predict\_reg != test\_reg$vs)

print(paste('Accuracy =', 1 - missing\_classerr))

ROCPred <- prediction(predict\_reg, test\_reg$vs)

ROCPer <- performance(ROCPred, measure = "tpr", x.measure = "fpr")

auc <- performance(ROCPred, measure = "auc")

auc <- auc@y.values[[1]]

auc

plot(ROCPer)

plot(ROCPer, colorize = TRUE,

     print.cutoffs.at = seq(0.1, by = 0.1),

     main = "ROC CURVE")

abline(a = 0, b = 1)

auc <- round(auc, 4)

legend(.6, .4, auc, title = "AUC", cex = 1)

data(Titanic)

data <- as.data.frame(Titanic)

model <- glm(Survived ~ Class + Sex + Age, family = binomial, data = data)

summary(model)

install.packages("ROCR")

library(ROCR)

model <- glm(Survived ~ Class + Sex + Age, family = binomial, data = data)

predictions <- predict(model, type = "response")

prediction\_objects <- prediction(predictions, titanic\_df$Survived)

Output:-

