Assignment 9.2

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5. Problem Statement

1. Use the below given data set

DataSet

2. Perform the below given activities:

a. Create classification model using different decision trees.

b. Verify model goodness of fit.

c. Apply all the model validation techniques.

d. Make conclusions

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Example\_WearableComputing\_weight\_lifting\_exercises\_biceps\_curl\_variations <- read.csv2("C:/Users/IBM\_ADMIN/Downloads/Example\_WearableComputing\_weight\_lifting\_exercises\_biceps\_curl\_variations.csv", sep="", comment.char="#")

library(rpart)

fit <- rpart(EXAMPLE ~ DATA.,

method="class", data=Example\_WearableComputing\_weight\_lifting\_exercises\_biceps\_curl\_variations)

printcp(fit) # display the results

plotcp(fit) # visualize cross-validation results

summary(fit) # detailed summary of splits

# plot tree

plot(fit, uniform=TRUE,

main="Classification Tree for Example\_WearableComputing\_weight\_lifting\_exercises\_biceps\_curl\_variations ")

text(fit, use.n=TRUE, all=TRUE, cex=.8)

pfit<- prune(fit, cp= fit$cptable[which.min(fit$cptable[,"xerror"]),"CP"])

# plot the pruned tree

plot(pfit, uniform=TRUE,

main="Pruned Classification Tree for Example\_WearableComputing\_weight\_lifting\_exercises\_biceps\_curl\_variations")

text(pfit, use.n=TRUE, all=TRUE, cex=.8)

post(pfit, file = "c:/[ptree.ps](http://ptree.ps/)",

title = "Pruned Classification Tree for Example\_WearableComputing\_weight\_lifting\_exercises\_biceps\_curl\_variations")

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