21BDS0340

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Programming for Data Science Lab

Digital Assignment – III

**Code**

install.packages("rpart")

library(rpart)

install.packages("rpart.plot")

library(rpart.plot)

install.packages("table1")

head(iris)

dim(iris)

s <- sample(150, 100)

iris\_train <- iris[s,]

iris\_test <- iris[-s,]

dim(iris\_train)

dim(iris\_test)

dtm <- rpart(Species~., iris\_train, method = "class")

plot(dtm)

text(dtm)

rpart.plot(dtm)

rpart.plot(dtm, type = 4, extra = 101)

p <- predict(dtm, iris\_test, type = "class")

table(iris\_test[, 5], p)

**Output**

> install.packages("rpart")

trying URL 'https://cran.rstudio.com/bin/macosx/big-sur-arm64/contrib/4.2/rpart\_4.1.23.tgz'

Content type 'application/x-gzip' length 737028 bytes (719 KB)

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downloaded 719 KB

The downloaded binary packages are in

/var/folders/*2f*/*9fz2wbqj7vlcygt681kl2k0m0000gn*/T//Rtmpbq6hsX/downloaded\_packages

> library(rpart)

> install.packages("rpart.plot")

trying URL 'https://cran.rstudio.com/bin/macosx/big-sur-arm64/contrib/4.2/rpart.plot\_3.1.2.tgz'

Content type 'application/x-gzip' length 1023650 bytes (999 KB)

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downloaded 999 KB

The downloaded binary packages are in

/var/folders/*2f*/*9fz2wbqj7vlcygt681kl2k0m0000gn*/T//Rtmpbq6hsX/downloaded\_packages

> library(rpart.plot)

> install.packages("table1")

trying URL 'https://cran.rstudio.com/bin/macosx/big-sur-arm64/contrib/4.2/table1\_1.4.3.tgz'

Content type 'application/x-gzip' length 371714 bytes (363 KB)

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downloaded 363 KB

The downloaded binary packages are in

/var/folders/*2f*/*9fz2wbqj7vlcygt681kl2k0m0000gn*/T//Rtmpbq6hsX/downloaded\_packages

> head(iris)

Sepal.Length Sepal.Width Petal.Length Petal.Width Species

1 5.1 3.5 1.4 0.2 setosa

2 4.9 3.0 1.4 0.2 setosa

3 4.7 3.2 1.3 0.2 setosa

4 4.6 3.1 1.5 0.2 setosa

5 5.0 3.6 1.4 0.2 setosa

6 5.4 3.9 1.7 0.4 setosa

> dim(iris)

[1] 150 5

> s <- sample(150, 100)

> iris\_train <- iris[s,]

> iris\_test <- iris[-s,]

> dim(iris\_train)

[1] 100 5

> dim(iris\_test)

[1] 50 5

> dtm <- rpart(Species~., iris\_train, method = "class")

> plot(dtm)

> text(dtm)

> rpart.plot(dtm)

> rpart.plot(dtm, type = 4, extra = 101)

> p <- predict(dtm, iris\_test, type = "class")

> table(iris\_test[, 5], p)

p

setosa versicolor virginica

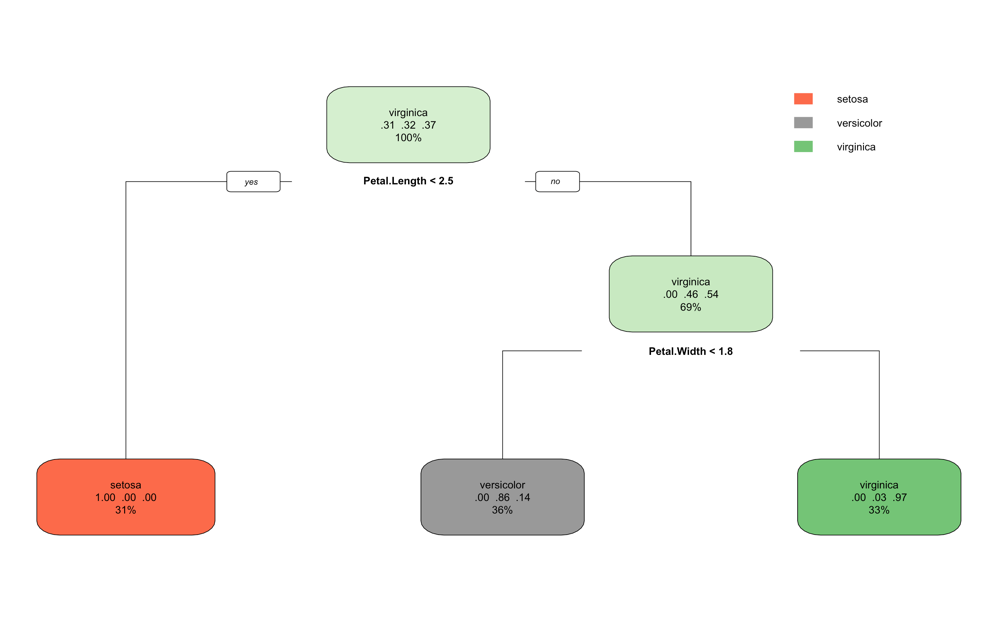
setosa 19 0 0

versicolor 0 18 0

virginica 0 0 13

A diagram of a diagram

Description automatically generated



A diagram of a diagram

Description automatically generated with medium confidence