

Data Analytics Lab 1

Step 1 - Import the excel file and checking content of the data

Convert the dataset into csv file, `Read.csv` tells R to read csv file.

```
Data <- read.csv("DT-Credit.csv", header=TRUE, sep= "; ")
```

Check distinct categories of Variables using STR function

```
str(Data)
```

```
attach(Data)
```

Step 2 - Install package rpart, and click on the checkbox in front of rpart library.

Develop the DT model:

```
DT_Model <- rpart(RESPONSE~., data=Data, control=rpart.control(minsplit=60,  
minbucket=30, maxdepth=4 ))
```

minsplit: the minimum number of observations that must exist in a node for a new split

minbucket: the minimum number of observations in any terminal <leaf> node

Maxdepth: Maximum depth for any node, with the root node counted as depth 0.

Step 3 - Install package partykit:

```
install.packages ("partykit")
```

```
library("partykit")
```

```
plot(as.party(DT_Model))
```

```
print(DT_Model)
```

Describe the results at the end of your scripts.

Working on binary response variable

Step 4. Change the response to Y/N answers.

```
Target=ifelse(RESPONSE==1,'Y','N')
```

Add Target to main dataset using

```
Data <- data.frame(Data,Target)
```

Check the content of the file

```
str(Data)
```

Drop the original variable (RESPONSE)

```
Data1=Data[,-32]
```

Develop the DT model again

```
DT_Model1<-rpart(Target~., data=Data1, control=rpart.control(minsplit=60, minbucket=30,
maxdepth=4 ))
```

```
plot(as.party(DT_Model1) )
```

```
print(DT_Model1)
```

Change the control parameters and see the change in the output (minsplit=60, minbucket=30, maxdepth=8).