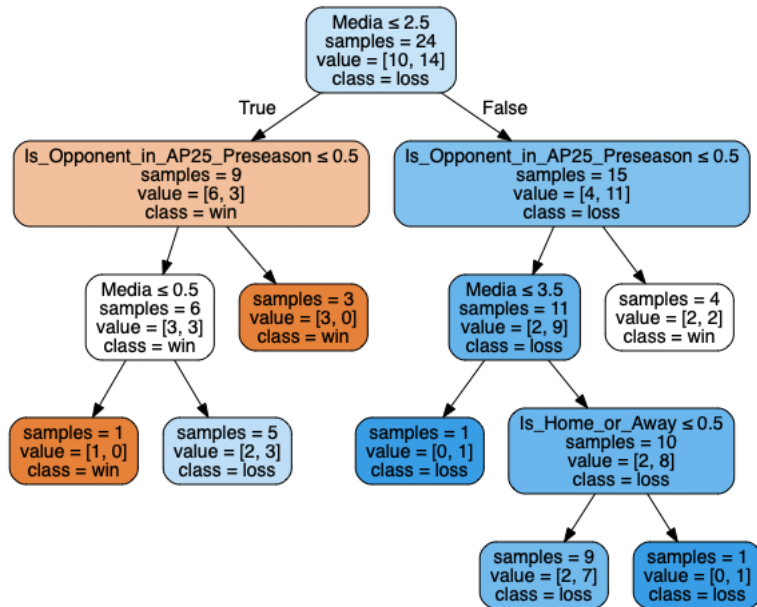


Q1 ID3 model using INFO Gain



Accuracy: 0.9166666666666666

f1: 0.9411764705882353

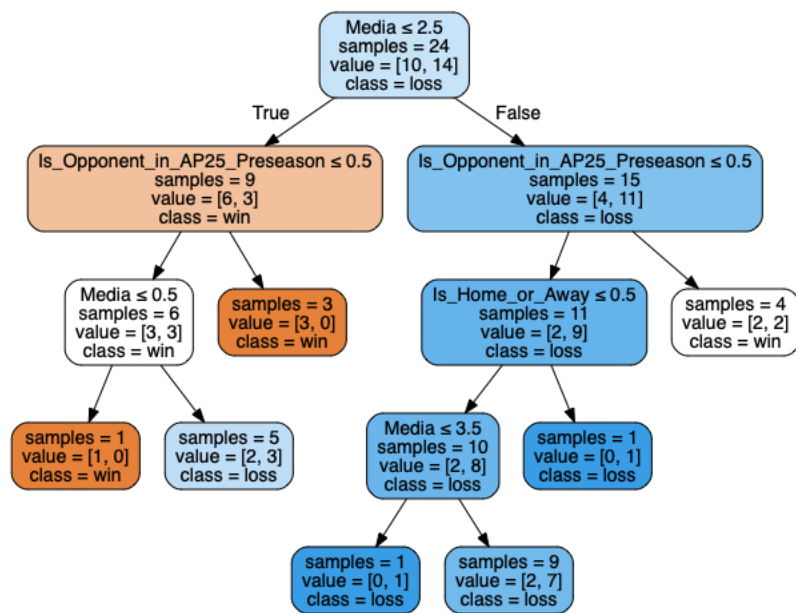
precision: 1.0

recall: 0.8888888888888888

original results: WinLoseWinWinWinWinWinWinWinLoseWinLose

predicted results: WinWinWinWinWinWinWinWinWinLoseWinLose

Q2 C45 model using Gain Ratio



Accuracy: 0.8333333333333334

f1: 0.8750000000000001

precision: 1.0

recall: 0.7777777777777778

original results: WinLoseWinWinWinWinWinWinWinLoseWinLose

predicted results: WinLoseLoseWinWinWinWinWinWinLoseLoseWinLose

Q3 Naïve Bayes Model

$$P(\text{Home} | W) = 5/7$$

$$P(\text{AWAY} | W) = 2/7$$

$$P(\text{Home} | L) = 1/2$$

$$P(\text{AWAY} | L) = 1/2$$

$$P(\text{IN} | W) = 1/7$$

$$P(\text{OUT} | W) = 6/7$$

$$P(\text{IN} | L) = 1/2$$

$$P(\text{OUT} | L) = 1/2$$

$$P(\text{FOX} | W) = 0$$

$$P(\text{ABC} | W) = 3/14$$

$$P(\text{CBS} | W) = 0$$

$$P(\text{ESPN} | W) = 1/14$$

$$P(\text{NBC} | W) = 5/7$$

$$P(\text{FOX} | L) = 1/10$$

$P(ABC|L) = 4/10$
 $P(CBS|L) = 1/10$
 $P(ESPN|L) = 0$
 $P(NBC|L) = 4/10$

prob of win in FOXHomeIn is 0.0
prob of win in FOXHomeOut is 0.0
prob of win in FOXAwayIn is 0.0
prob of win in FOXAwayOut is 0.0
prob of win in ABCHomeIn is 0.021865889212827987
prob of win in ABCHomeOut is 0.13119533527696792
prob of win in ABCAwayIn is 0.008746355685131194
prob of win in ABCAwayOut is 0.05247813411078716
prob of win in CBSHomeIn is 0.0
prob of win in CBSHomeOut is 0.0
prob of win in CBSAwayIn is 0.0
prob of win in CBSAwayOut is 0.0
prob of win in ESPNHomeIn is 0.007288629737609329
prob of win in ESPNHomeOut is 0.043731778425655975
prob of win in ESPNAwayIn is 0.0029154518950437313
prob of win in ESPNAwayOut is 0.017492711370262388
prob of win in NBCHomeIn is 0.0728862973760933
prob of win in NBCHomeOut is 0.43731778425655976
prob of win in NBCAwayIn is 0.029154518950437316
prob of win in NBCAwayOut is 0.1749271137026239
prob of loss in FOXHomeIn is 0.025
prob of loss in FOXHomeOut is 0.025
prob of loss in FOXAwayIn is 0.025
prob of loss in FOXAwayOut is 0.025
prob of loss in ABCHomeIn is 0.1
prob of loss in ABCHomeOut is 0.1
prob of loss in ABCAwayIn is 0.1
prob of loss in ABCAwayOut is 0.1
prob of loss in CBSHomeIn is 0.025
prob of loss in CBSHomeOut is 0.025
prob of loss in CBSAwayIn is 0.025
prob of loss in CBSAwayOut is 0.025
prob of loss in ESPNHomeIn is 0.0
prob of loss in ESPNHomeOut is 0.0
prob of loss in ESPNAwayIn is 0.0
prob of loss in ESPNAwayOut is 0.0
prob of loss in NBCHomeIn is 0.1
prob of loss in NBCHomeOut is 0.1
prob of loss in NBCAwayIn is 0.1
prob of loss in NBCAwayOut is 0.1

prediction of FOXHomeIn is loss
prediction of FOXHomeOut is loss
prediction of FOXAwayIn is loss
prediction of FOXAwayOut is loss
prediction of ABCHomeIn is loss
prediction of ABCHomeOut is win
prediction of ABCAwayIn is loss
prediction of ABCAwayOut is loss

prediction of CBSHomeIn is loss
prediction of CBSHomeOut is loss
prediction of CBSAwayIn is loss
prediction of CBSAwayOut is loss
prediction of ESPNHomeIn is win
prediction of ESPNHomeOut is win
prediction of ESPNAwayIn is win
prediction of ESPNAwayOut is win
prediction of NBCHomeIn is loss
prediction of NBCHomeOut is win
prediction of NBCAwayIn is loss
prediction of NBCAwayOut is win

original results: WinLoseWinWinWin WinWinWinWinLose WinLose
predicted results: WinLoseWinLoseWin LoseLoseWinWinLose WinLose

Accuracy: 75%

