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MET CS677
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Homework #5

Question 1.

Please see main.py

Question 2. (Naïve Bayesian)

Please see main.py

2. What is the accuracy?

82.5%

3. Compute the confusion matrix:

[[149, 81]

[105, 728]]

Question 3. (Decision Tree)

Please see main.py

2. What is the accuracy?

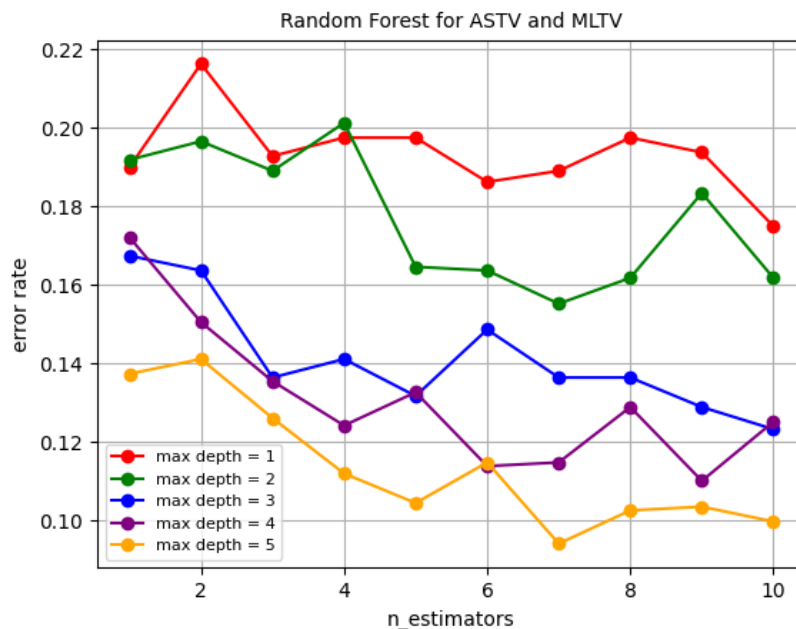
86.92%

3. Compute the confusion matrix:

[[179, 51]

[88, 745]]

Question 4. (Random Forest)



3. What is the accuracy for the best combo of n and d ?

Estimators = 7, depth = 5. Error rate = 0.094073, Accuracy = 0.905927

4. Compute the confusion matrix for the best combo.

[[163, 67]

[33, 800]]

Question 5.

<u>Model</u>	<u>TP</u>	<u>FP</u>	<u>TN</u>	<u>FN</u>	<u>Accuracy</u>	<u>TPR</u>	<u>TNR</u>
Naïve Bayesian	149	81	728	105	82.50%	0.59	0.90
Decision Tree	179	51	745	88	86.92%	0.67	0.94
Random Forest	163	67	800	33	90.60%	0.83	0.92