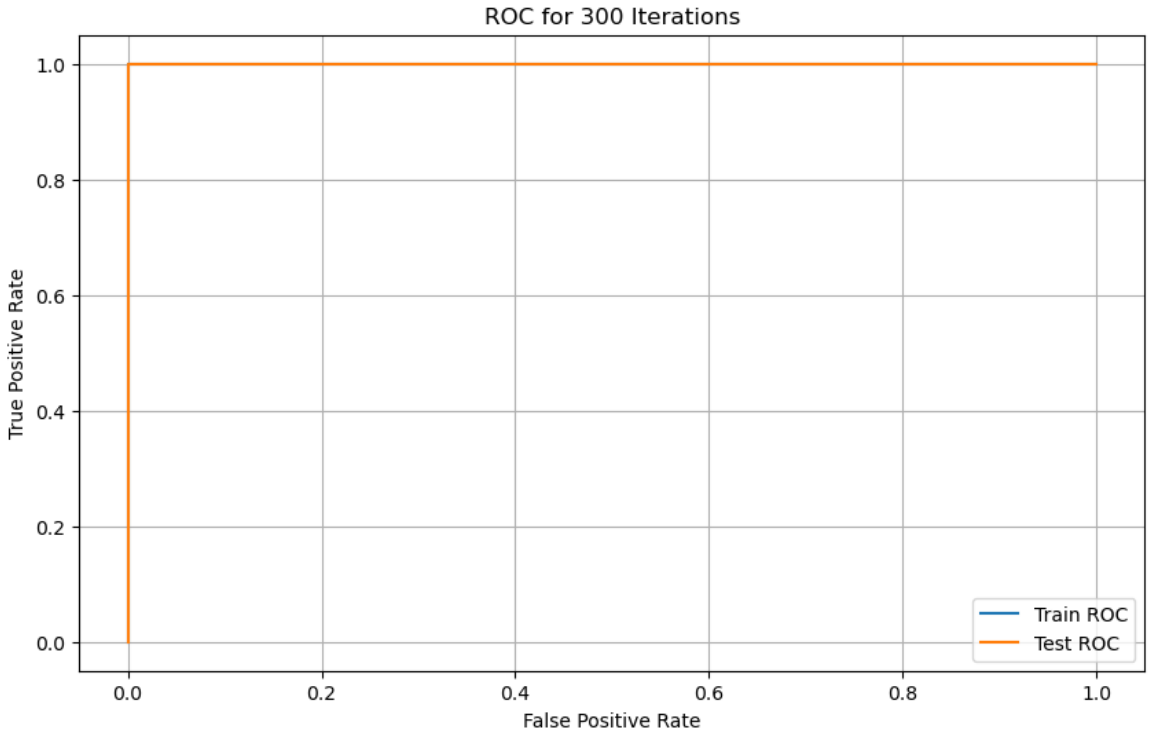
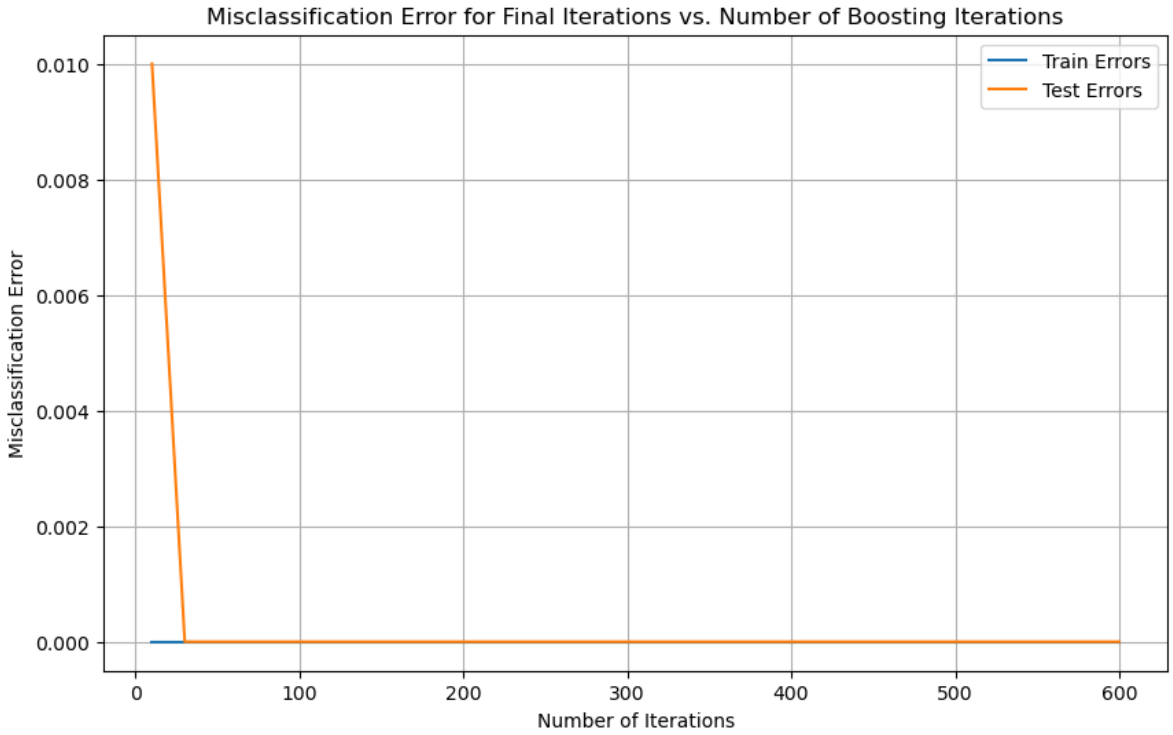
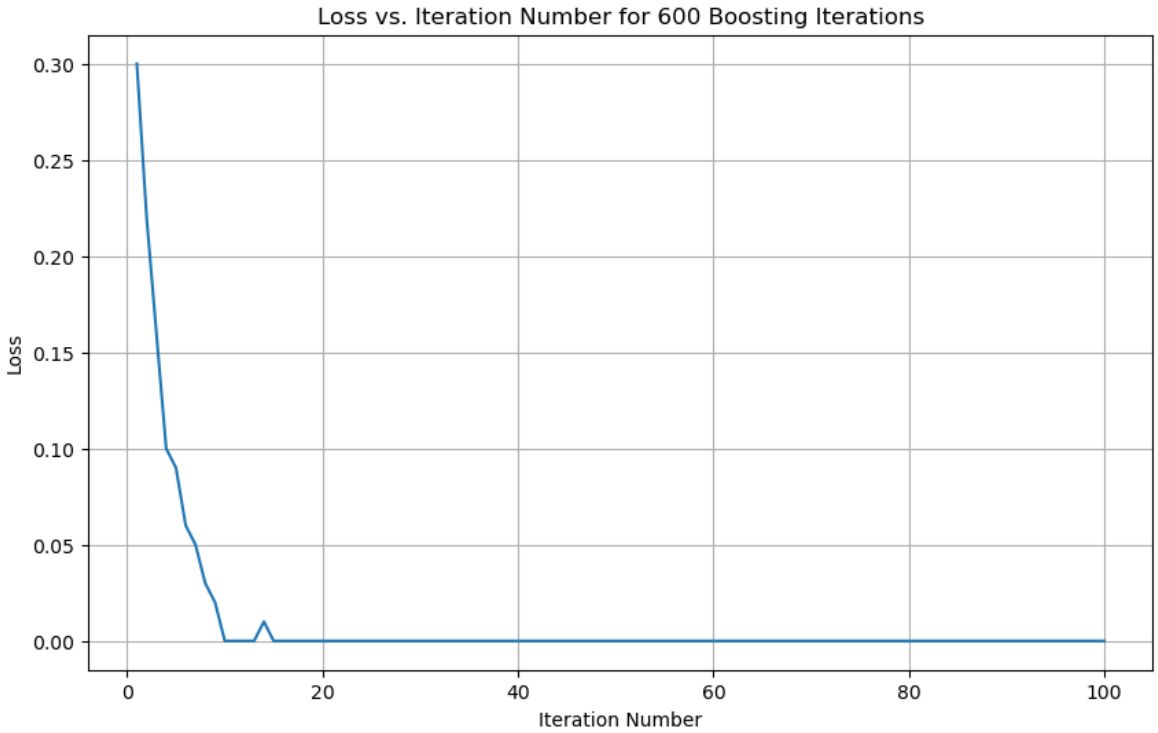
Homework 6

Evan Stansell

(a) Arcene dataset

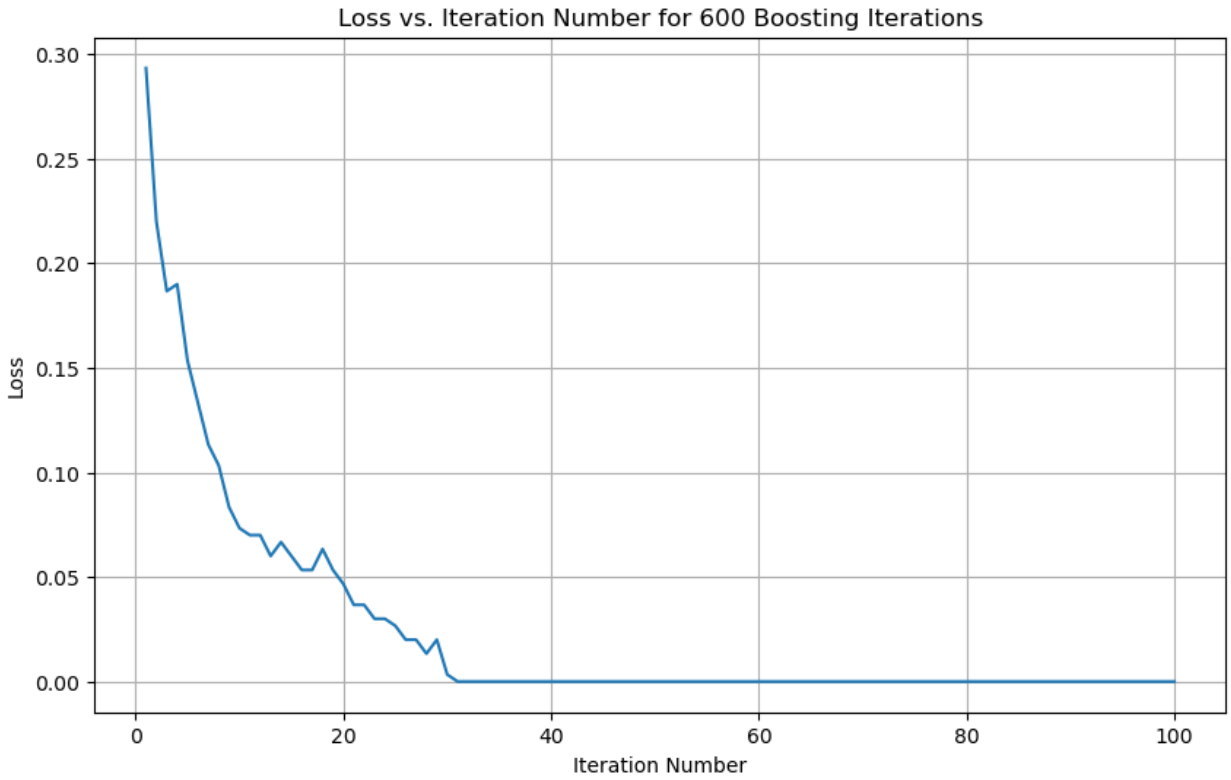


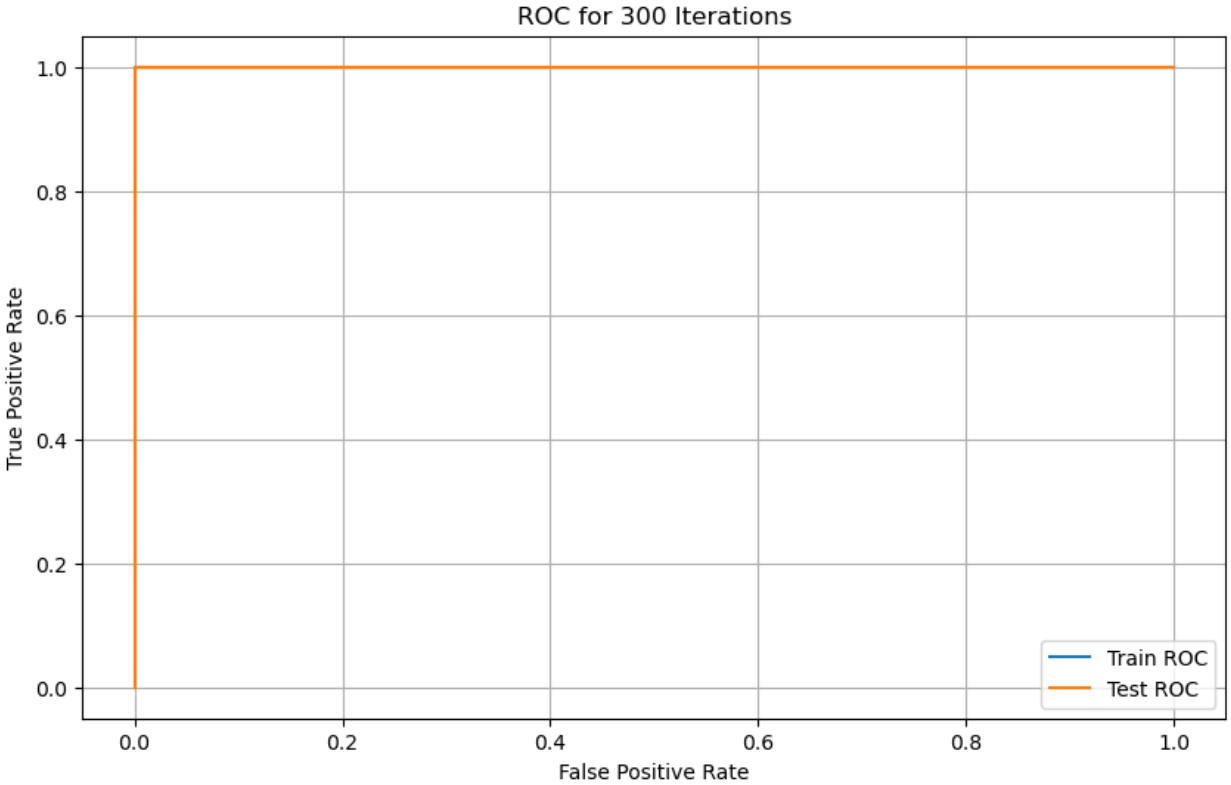


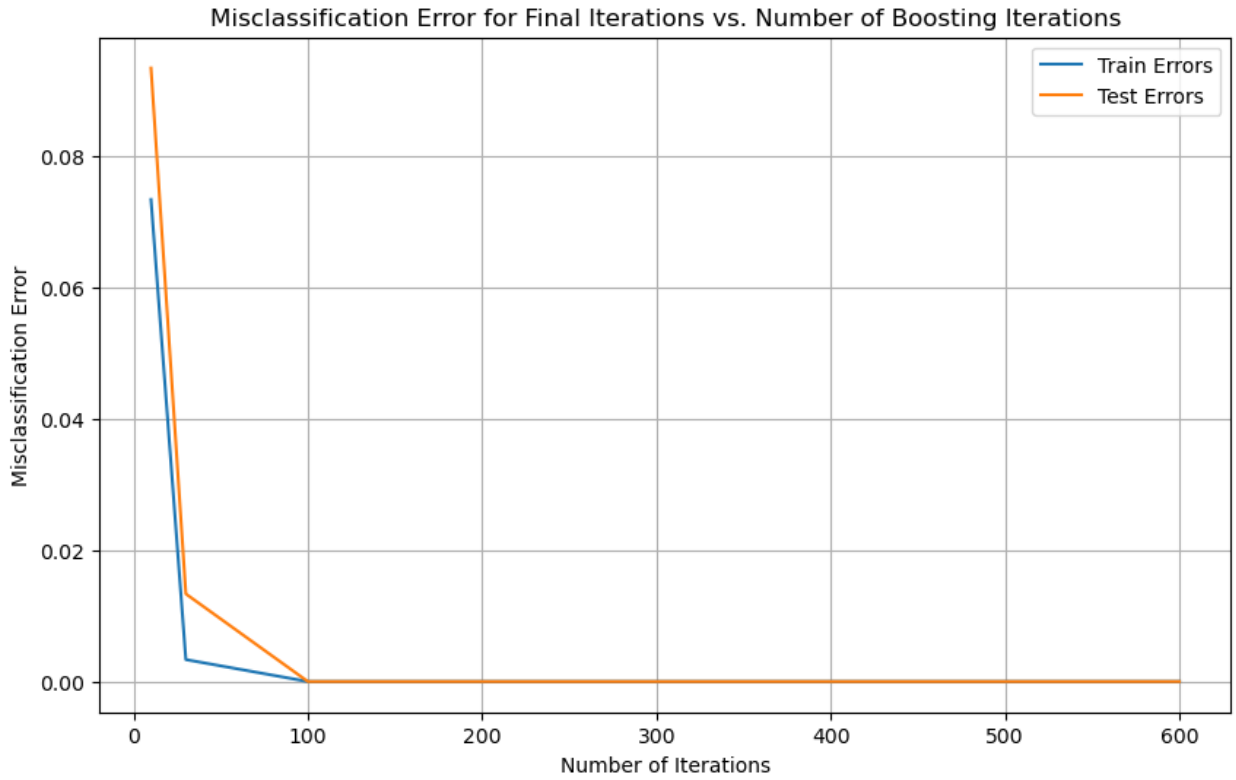


Iterations	Train Misclass	Test Misclass
10	0.00	0.01
30	0.00	0.00
100	0.00	0.00
300	0.00	0.00
600	0.00	0.00

(b) Dexter dataset

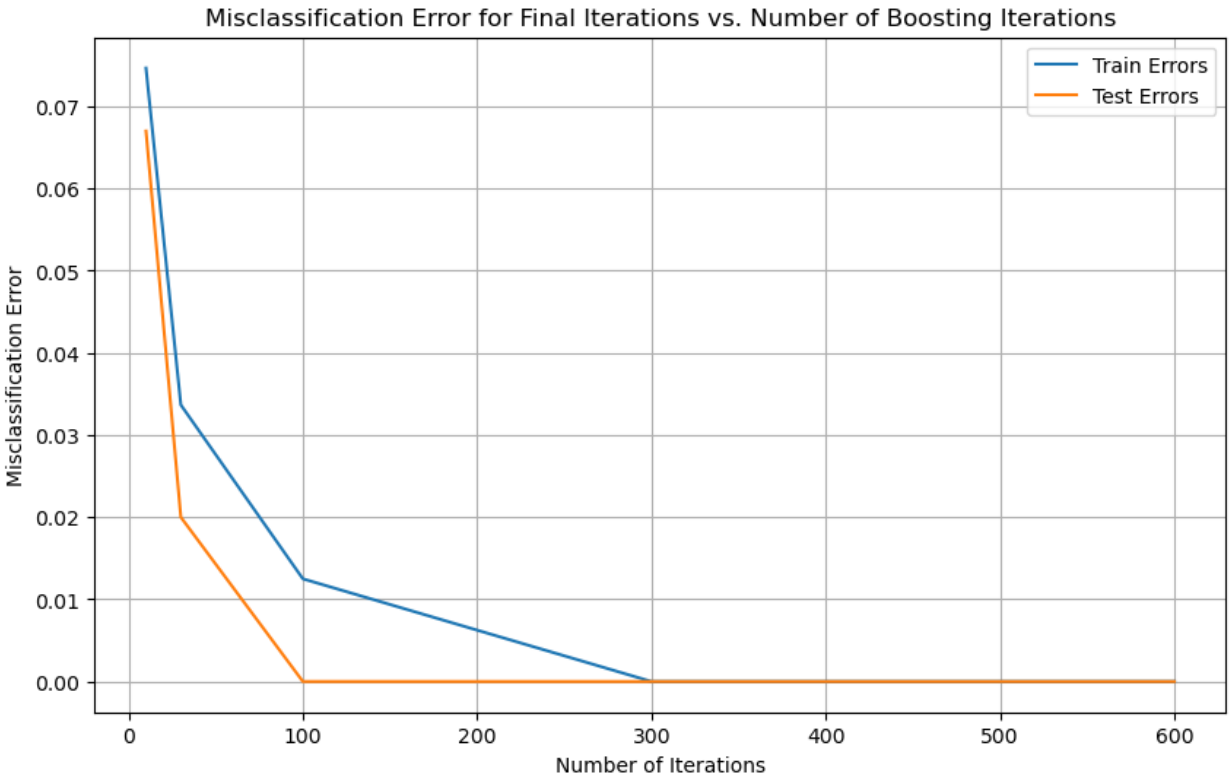

Loss vs. Iteration Number for 600 Boosting Iterations
Loss
Iteration Number
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0
20
40
60
80
100

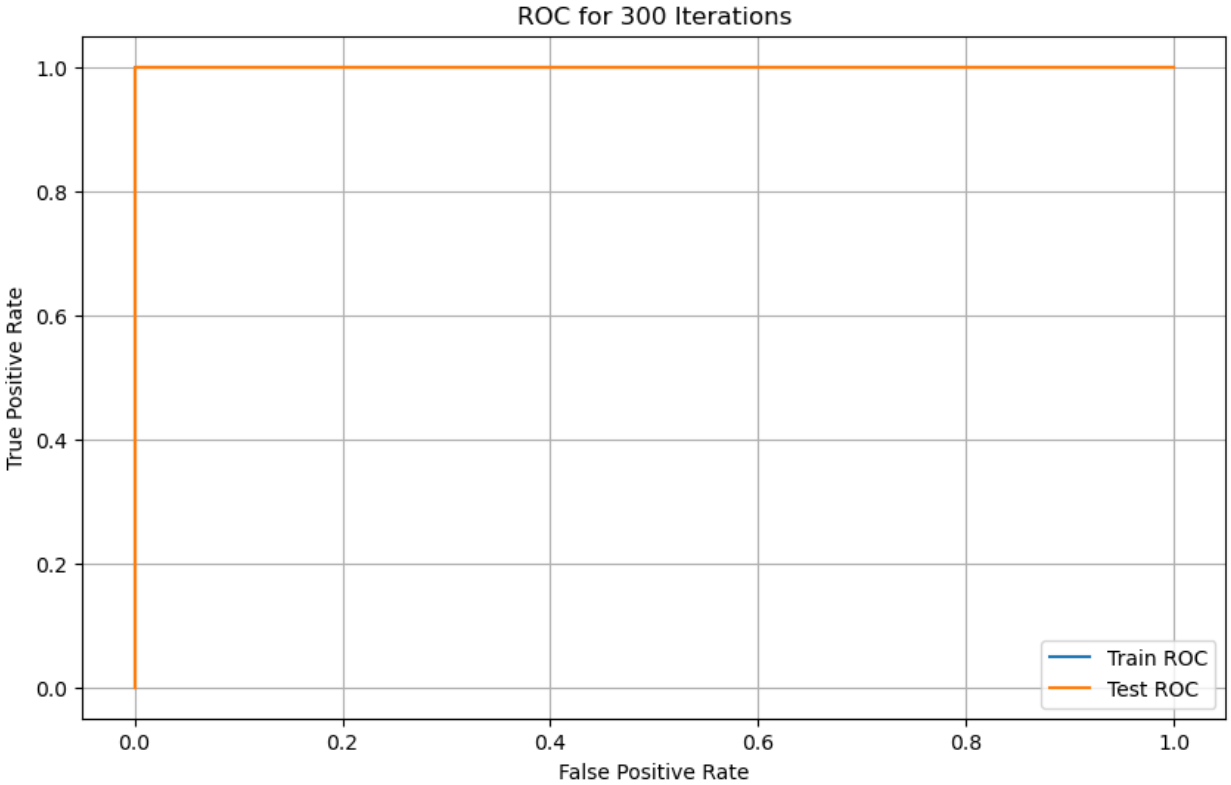

ROC for 300 Iterations
True Positive Rate
False Positive Rate
Train ROC
Test ROC
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0

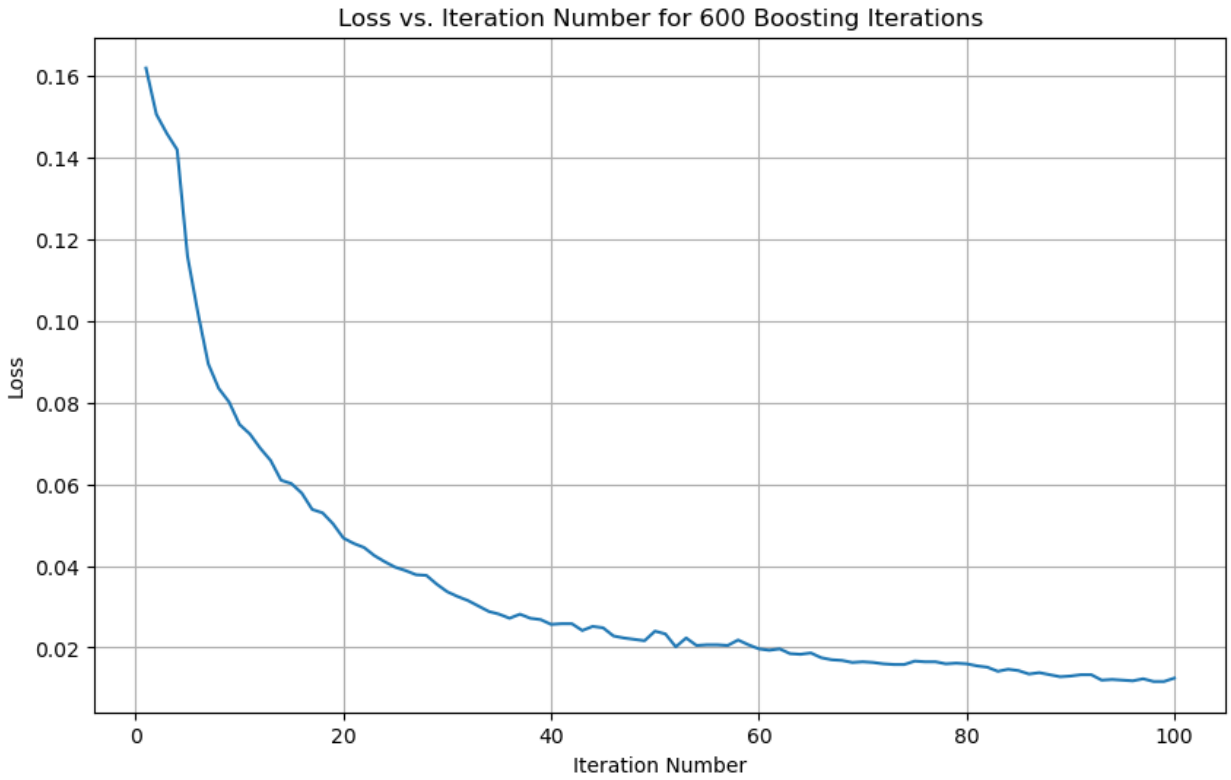


Iterations	Train Misclass	Test Misclass
10	0.073	0.093
30	0.003	0.013
100	0.00	0.00
300	0.00	0.00
600	0.00	0.00

(c) Gisette dataset


Misclassification Error for Final Iterations vs. Number of Boosting Iterations
Train Errors
Test Errors
Misclassification Error
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0
100
200
300
400
500
600
Number of Iterations


ROC for 300 Iterations
Train ROC
Test ROC
True Positive Rate
0.0
0.2
0.4
0.6
0.8
1.0
0.0
0.2
0.4
0.6
0.8
1.0
False Positive Rate



Iterations	Train Misclass	Test Misclass
10	0.075	0.067
30	0.034	0.020
100	0.012	0.00
300	0.00	0.00
600	0.00	0.00