Instruction on how to run:

There are three function written namely dataset_1, dataset_2, dataset_3 just call any of them from 1605062.py it will be able to run if the data_file is in the same directory.

Telco Customer Churn Dataset:

tp:779   fn:702   tp:213   fn:175

fp:405   tn:3748   fp:95   tn:926

Performance Measure	Training	Test
Accuracy	80.35	80.83
Recall	52.59	54.89
Specificity	90.24	90.69
Precision	65.79	69.15
False Discovery Rate	34.20	30.84
F1 Score	58.46	61.20

Number of Boosting Rounds	Training	Test
5	80.44	80.19
10	80.26	79.91
15	80.26	80.34
20	80.10	80.26

Comment: alpha was 0.00005 and max_iteration was 200

Couldn't implement weak learner properly so performance doesn't increase with more boosting significantly.

Credit Card Fraud Detection Dataset:

tp:308	fn:78		tp:67	fn:20
fp:0	tn:7992		fp:3	tn:2005

Performance Measure	Training	Test
Accuracy	99.06	98.90
Recall	79.79	77.01
Specificity	100	99.85
Precision	100	95.71
False Discovery Rate	0	4.28
F1 Score	88.76	85.35

Number of Boosting Rounds	Training	Test
5	97.95	98.18
10	99.12	98.80
15	99.12	98.80
20	99.12	98.80

Comment: alpha was 0.00005 and max_iteration was 1000

Couldn't implement weak learner properly so performance doesn't increase with more boosting significantly.

Adult Dataset:

tp:5661	fn:2178	tp:2753	fn:1093
fp:3644	tn:21053	fp:1831	tn:10599

Performance Measure	Training	Test
Accuracy	82.10	82.03
Recall	72.21	71.58
Specificity	85.24	85.26
Precision	60.83	60.05
False Discovery Rate	39.16	39.94
F1 Score	66.04	65.31

Number of Boosting Rounds	Training	Test
5	83.58	83.19
10	83.59	83.19
15	83.59	83.19
20	83.60	83.24

Comment: alpha was 0.00005 and max_iteration was 200

Couldn't implement weak learner properly so performance doesn't increase with more boosting significantly.