# **Programming Assignment: 2**

-Neelam Tikone

### **BAGGING:**

• Depth 3, Bags 5

• Depth 5, Bags 5

• Depth 3, Bags 10

## • Depth 5, Bags 10

# **Bagging by WEKA**

```
=== Summary ===
```

=== Detailed Accuracy By Class ===

	TP Rate	FP Rate	Precision	Recall	F-Measure	MCC	ROC Area	PRC Area	Class
	0.746	0.000	1.000	0.746	0.854	0.206	0.873	0.996	0
	1.000	0.254	0.057	1.000	0.107	0.206	0.873	0.057	1
Weighted Avg.	0.750	0.004	0.986	0.750	0.843	0.206	0.873	0.982	

=== Confusion Matrix ===

```
a b <-- classified as
1561 532 | a = 0
0 32 | b = 1
```

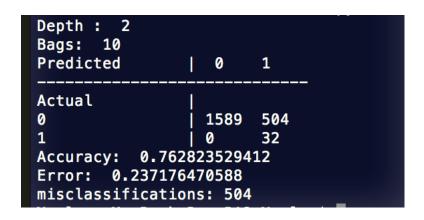
### **BOOSTING:**

• Depth 1, Boosted Trees 5:

• Depth 2, Boosted Trees 5:

• Depth 1, Boosted Trees 10:

• Depth 2, Boosted Trees 10:



### **Adaboost using WEKA**

```
=== Summary ===
Correctly Classified Instances
                                   1611
                                                     75.8118 %
                                                     24.1882 %
Incorrectly Classified Instances
                                    514
                                      0.0847
Kappa statistic
Mean absolute error
                                      0.2452
Root mean squared error
                                      0.4889
Relative absolute error
                                     44.1395 %
Root relative squared error
                                     87.9716 %
Total Number of Instances
                                   2125
=== Detailed Accuracy By Class ===
                TP Rate FP Rate Precision Recall
                                                   F-Measure MCC
                                                                      ROC Area PRC Area Class
                0.754
                        0.000
                                1.000
                                           0.754
                                                   0.860
                                                              0.210
                                                                      0.994
                                                                               1.000
                                           1.000
                                                   0.111
                                                                      0.994
                1.000
                        0.246
                                0.059
                                                              0.210
                                                                               0.571
                                                                                         1
                        0.004
Weighted Avg.
                0.758
                                0.986
                                           0.758
                                                   0.849
                                                             0.210
                                                                      0.994
                                                                               0.993
=== Confusion Matrix ===
        b <-- classified as
 1579 514 | a = 0
   0 32 |
              b = 1
```