

## COMS W4771 Machine Learning: Assignment 2

Q 1)

Here are the training and test errors I received for the various uncertainty notions:

### Classification Error

Depth	Training Error	Test Error
1	0.2024437656	0.217
3	0.09997222994	0.114
6	0.07025826159	0.096

### Gini Index

Depth	Training Error	Test Error
1	0.2027214663	0.219
3	0.1019161344	0.117
6	0.06276034435	0.098

### **Entropy**

Depth	Training Error	Test Error
1	0.2027214663	0.219
3	0.1266314913	0.128
6	0.0688697584	0.09

### **Q 2)**

Here are the training and test errors I received for different number of passes when running the perceptron algorithm:

Number of passes	Training Error	Test Error
1	0.4770896973	0.445
10	0.3540683144	0.338
50	0.2888086643	0.279
100	0.2610386004	0.249

## **Study Group**

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