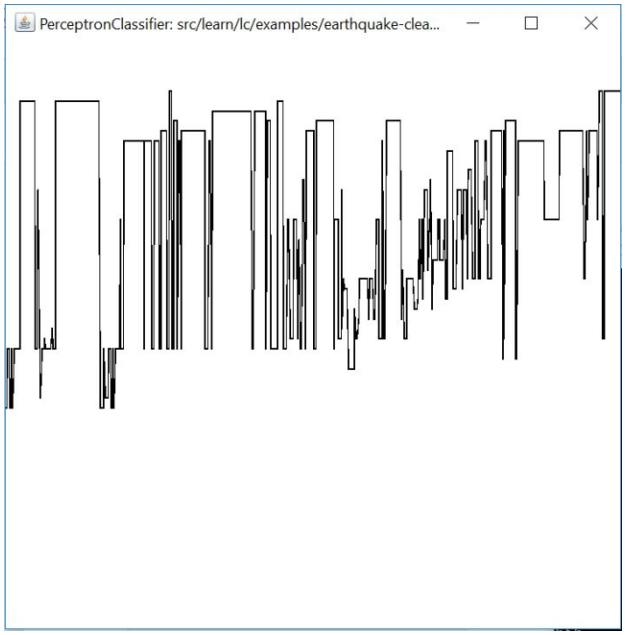
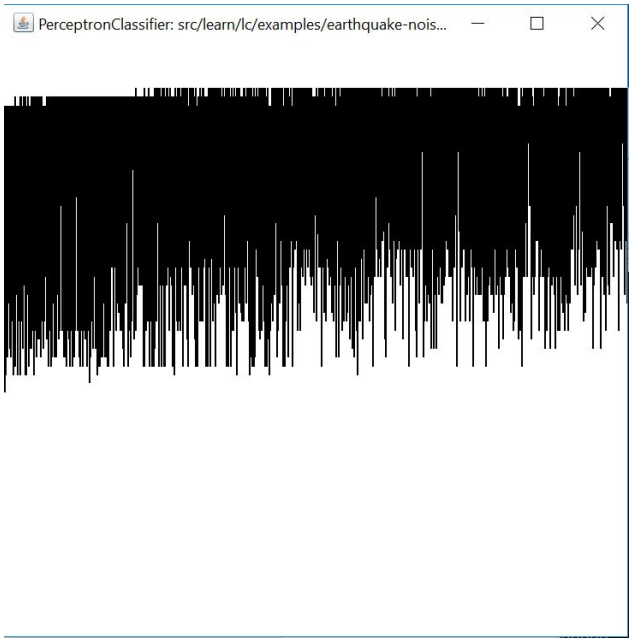
Linear Classifier

Running through command line, sample inputs (and their graphs) are as follows:
Note that the type of classifier is specified as pC or lC, the number of runs is specified after the name of the text data, and lastly, alpha, the decay rate, is either specified, or absent. In the latter case, a default, decaying alpha rate is enforced.
Note also that the x axis plots the number of trials, while the y axis plots the accuracy, increasing from 0 to 1.

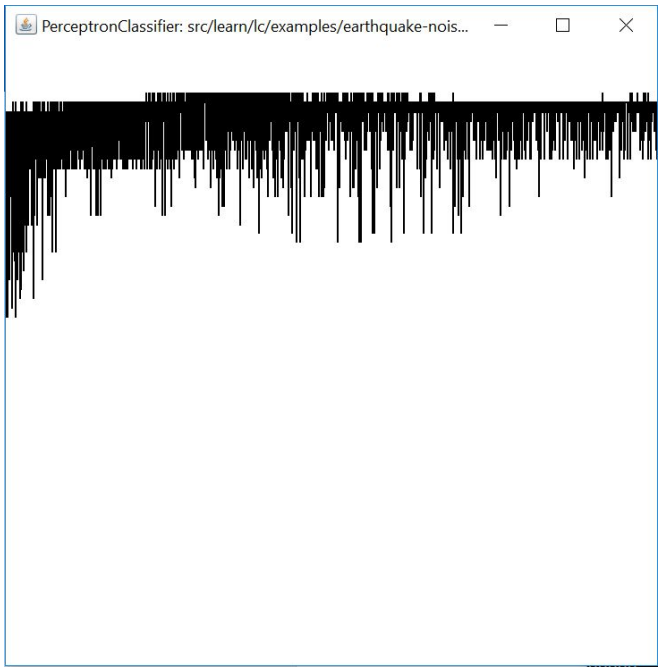
```
java -cp "./bin" MainLC pC earthquake-clean.data.txt 657 .001
```



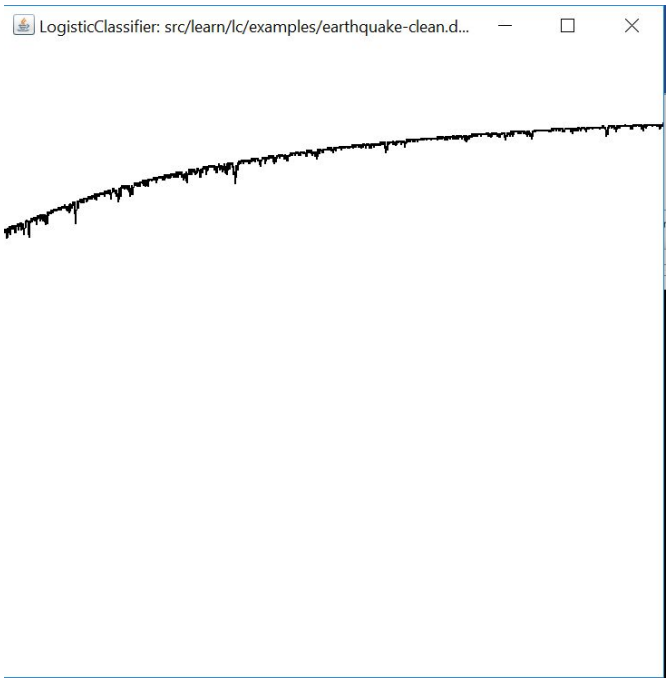

```
java -cp "./bin" MainLC pC earthquake-noisy.data.txt 100000 .99
```



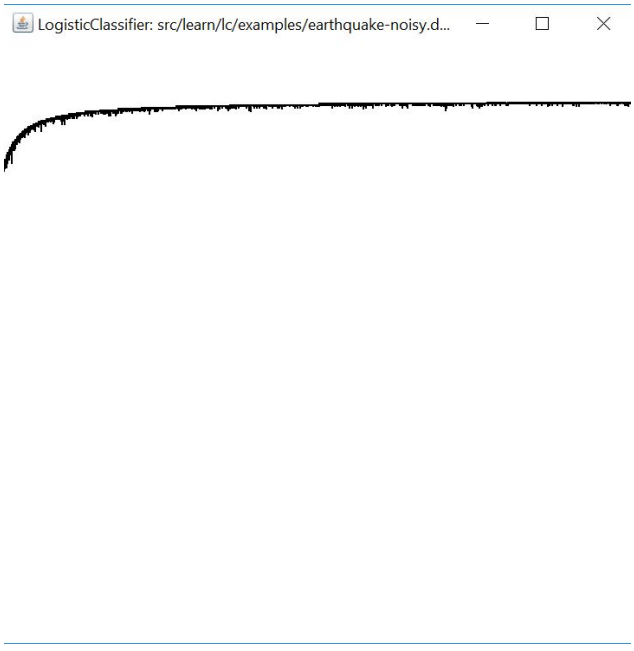

```
java -cp "./bin" MainLC pC earthquake-noisy.data.txt 100000 .99
```




```
java -cp "./bin" MainLC lC earthquake-clean.data.txt 5000 .01
```



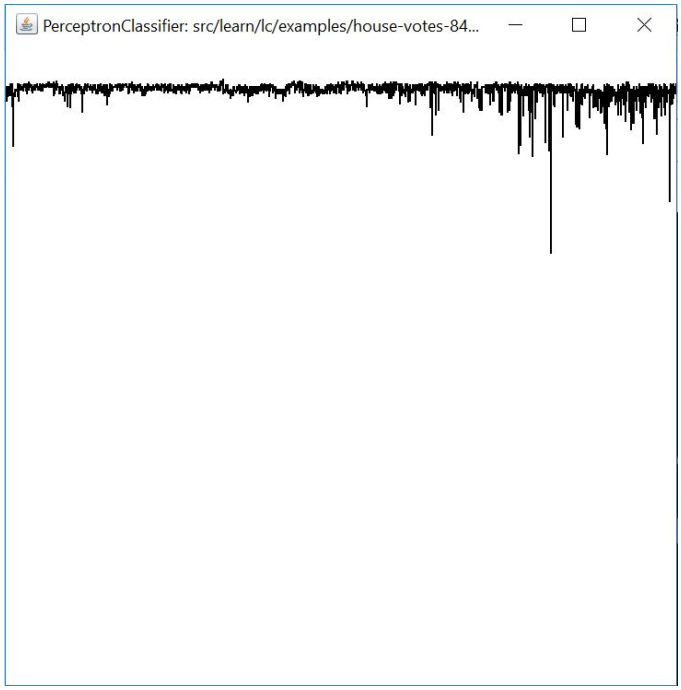

```
java -cp "./bin" MainLC lC earthquake-noisy.data.txt 100000 .01
```



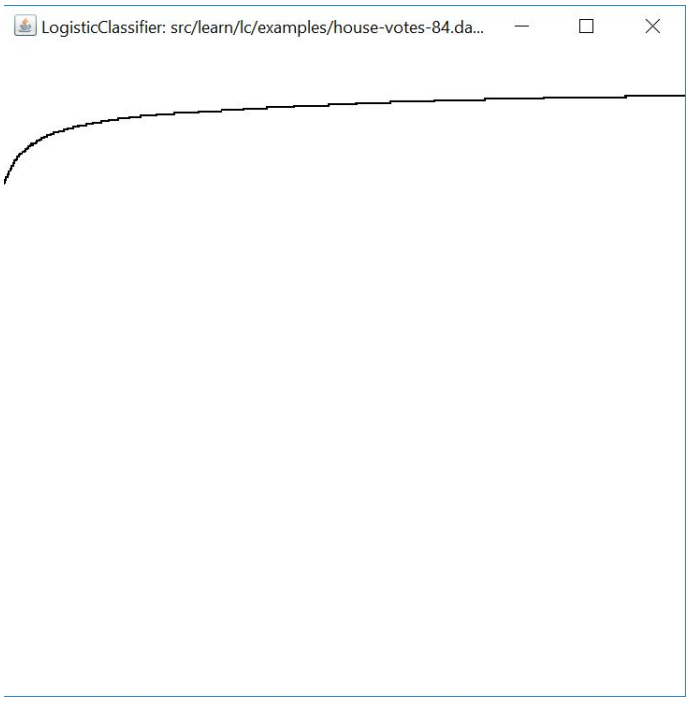

```
java -cp "./bin" MainLC lC earthquake-noisy.data.txt 100000
```


```
java -cp "./bin" MainLC pC house-votes-84.data.num.txt 657 .01
```

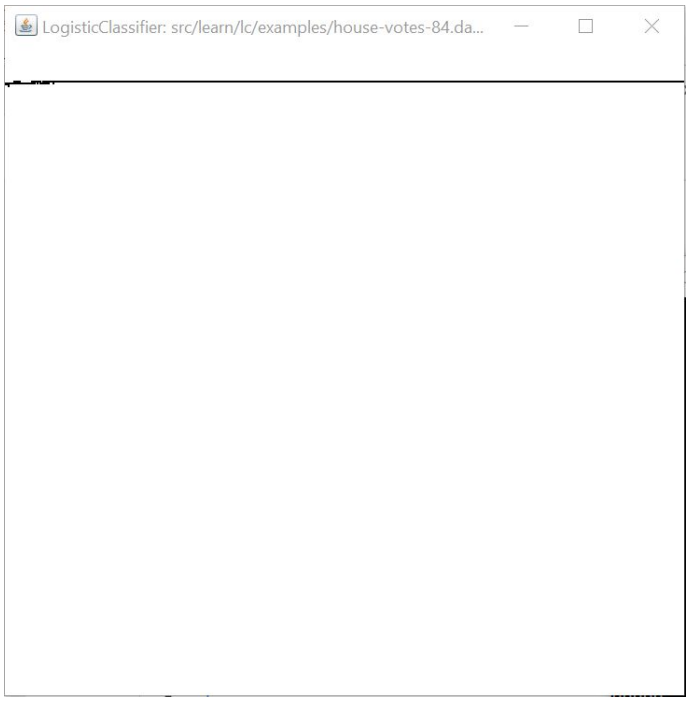

```
java -cp "./bin" MainLC pC house-votes-84.data.num.txt 100000
```



```
java -cp "./bin" MainLC lC house-votes-84.data.num.txt 5000 .01
```




```
java -cp "./bin" MainLC lC house-votes-84.data.num.txt 100000
```



Neural Network

The following are the command for running the Neural Network samples.

The networks are more that 95% accurate if you run the program using the following default commands on command line:

```
java -cp "./bin" MainNNIris

java -cp "./bin" MainNNXorNN

java -cp "./bin" MainNNMNIST
```

You may also specify the epoch and alpha respectively as shown below:

```
java -cp "./bin" MainNNIris 100 .5

java -cp "./bin" MainNNXorNN 90 .01

java -cp "./bin" MainNNMNIST 20 .5
```

Once you run the program, enough data will be generated showing how accuracy improves with the no. of epoch

Great Project! Thanks for being an awesome TA!!! All the best.