

CSC242 Project 4 Report

Instructions to run the project:

Open the project folder in the terminal and then use the following command to compile it:

```
javac src/**/*.java
```

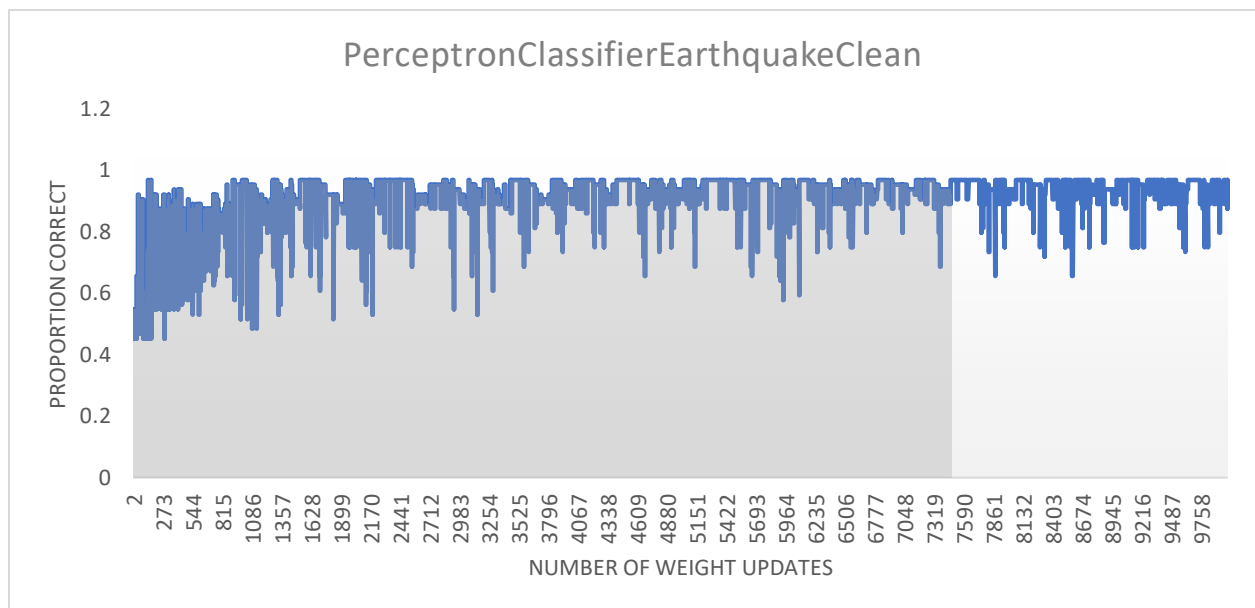
After it is compiled, use this command to run the desired java file. I have implemented the Classifiers with display along with this report to give the user a visual representation of the output.

```
java -cp ./src learn.lc.examples.PerceptronClassifierWithDisplay
```

```
src/learn/lc/examples/earthquake-noisy.data.txt 700 0.95
```

You can change the file name, number of weight updates, and alpha accordingly in the command.

1) PerceptronClassifierEarthquakeClean



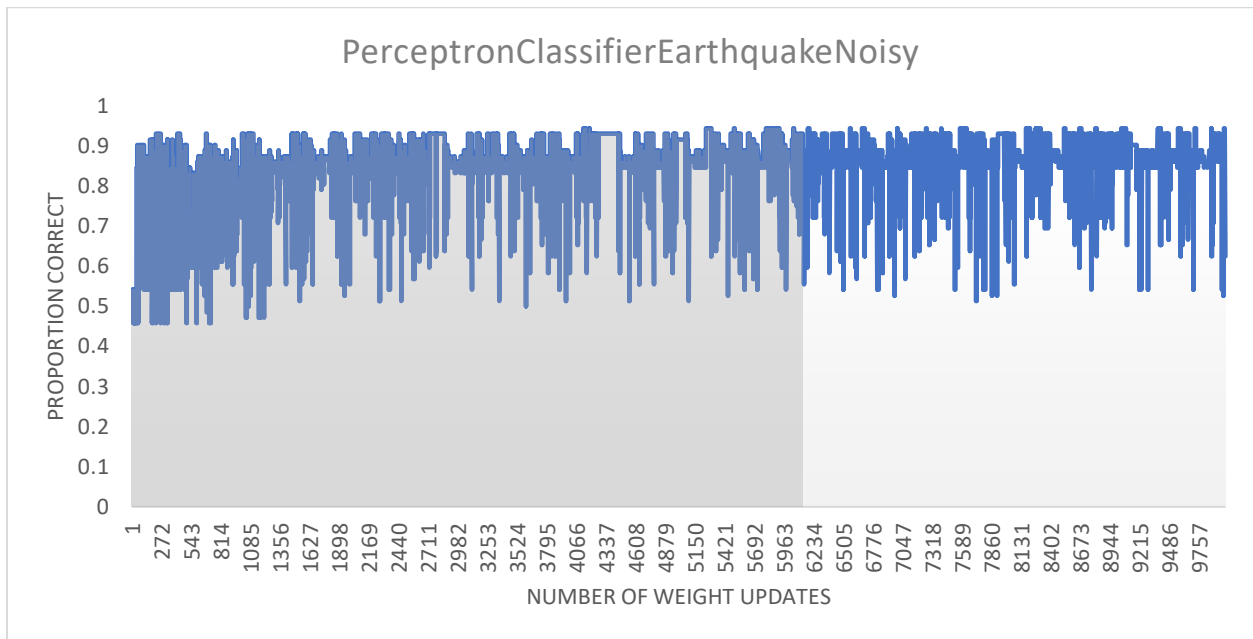
Classifier used: Perceptron Classifier

Test Data used: Earthquake-Clean

Number of Steps: 10,000

alpha: 0.95

2) PerceptronClassifierEarthquakeNoisy



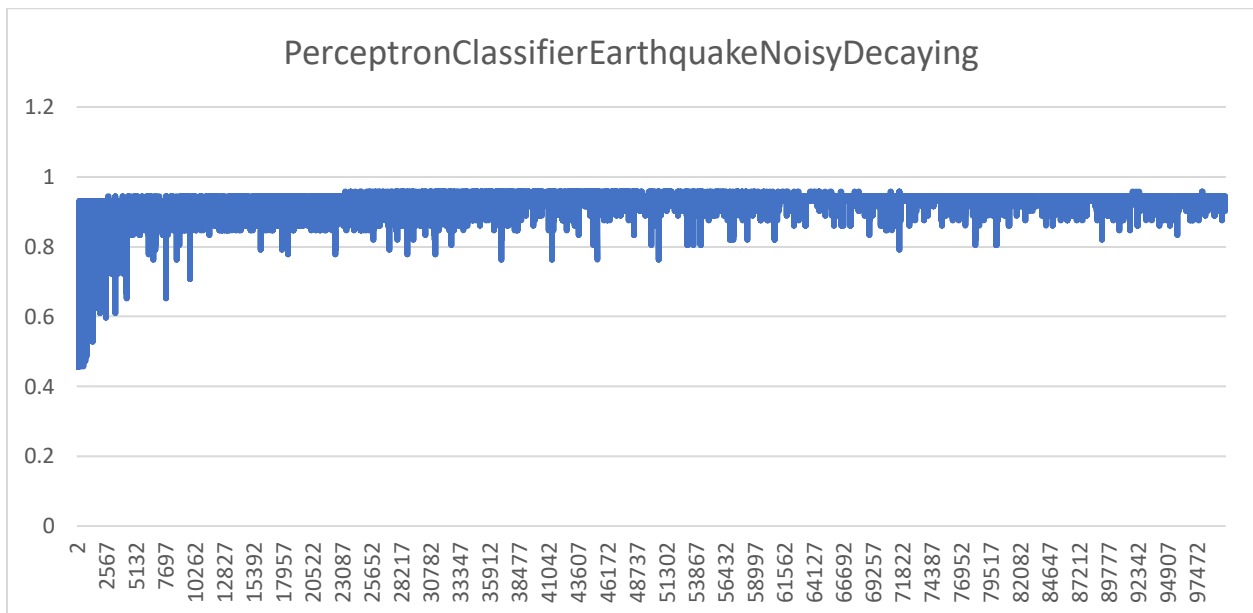
Classifier used: Perceptron Classifier

Test Data used: Earthquake-Noisy

Number of Steps: 10,000

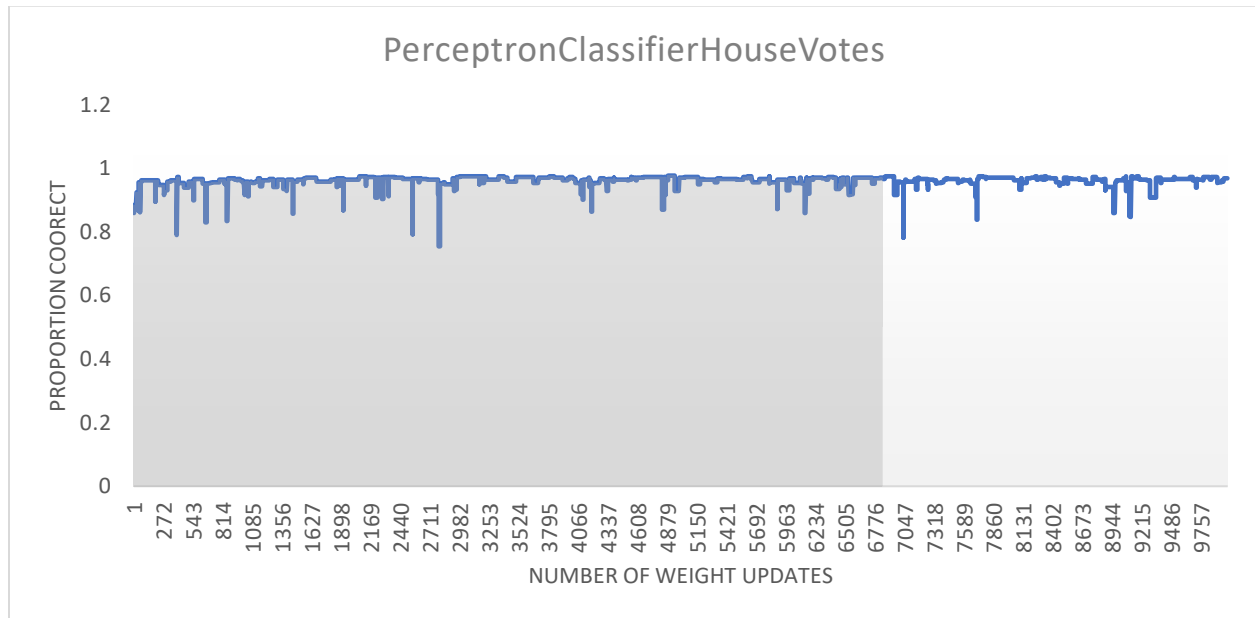
alpha: 0.95

3) PerceptronClassifierEarthquakeNoisyDecaying



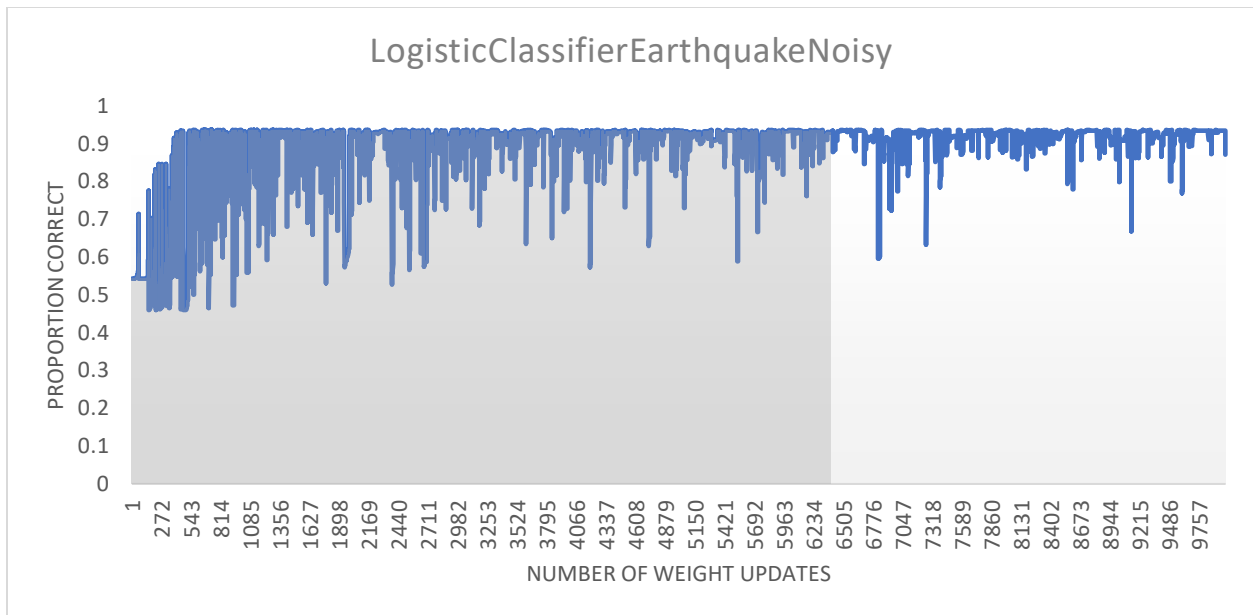
Classifier used: Perceptron Classifier
Test Data used: Earthquake-Noisy
Number of Steps: 10,000
alpha: 0

4) PerceptronClassifierHouseVotes



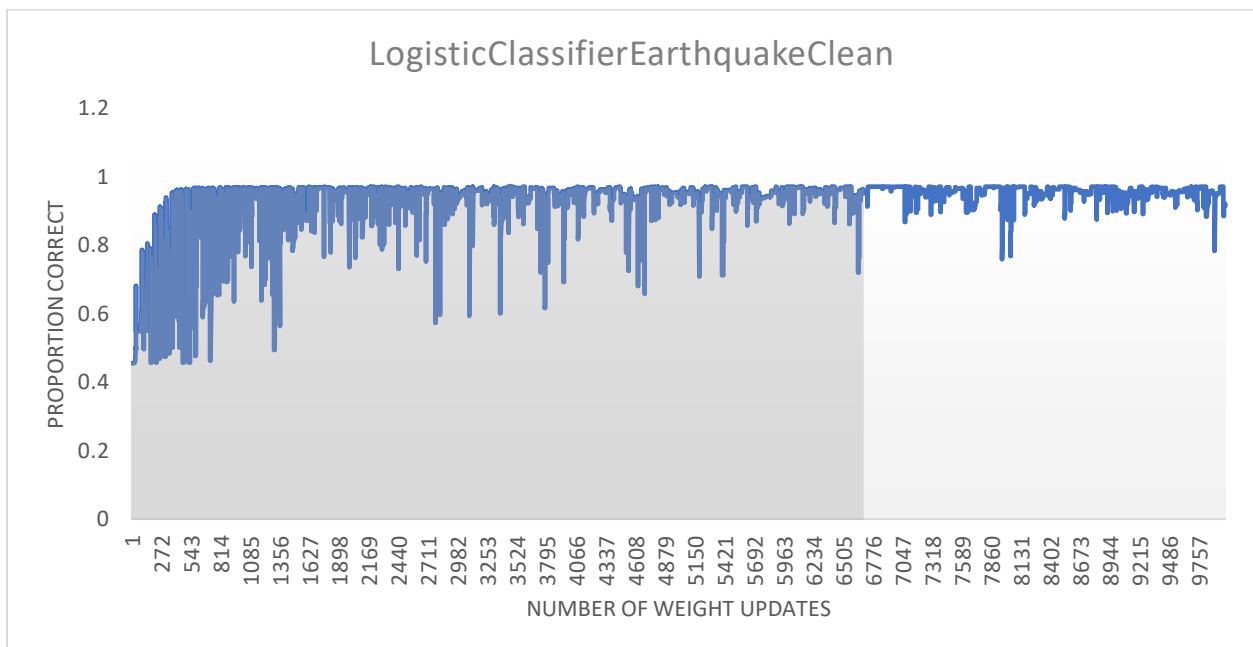
Classifier used: Perceptron Classifier
Test Data used: House-votes-84
Number of Steps: 10,000
alpha: 0.95

5) LogisticClassifierEarthquakeNoisy



Classifier used: Logistic Classifier
Test Data used: Earthquake-Noisy
Number of Steps: 10,000
alpha: 0.95

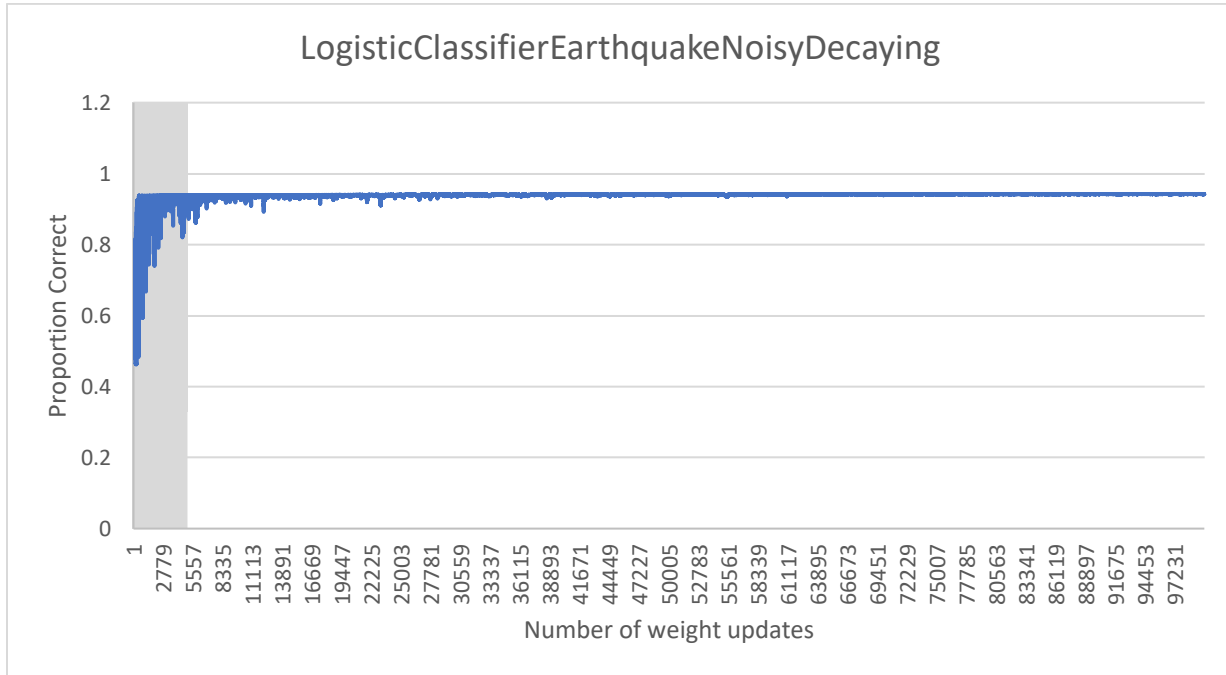
6) LogisticClassifierEarthquakeClean



Classifier used: Logistic Classifier

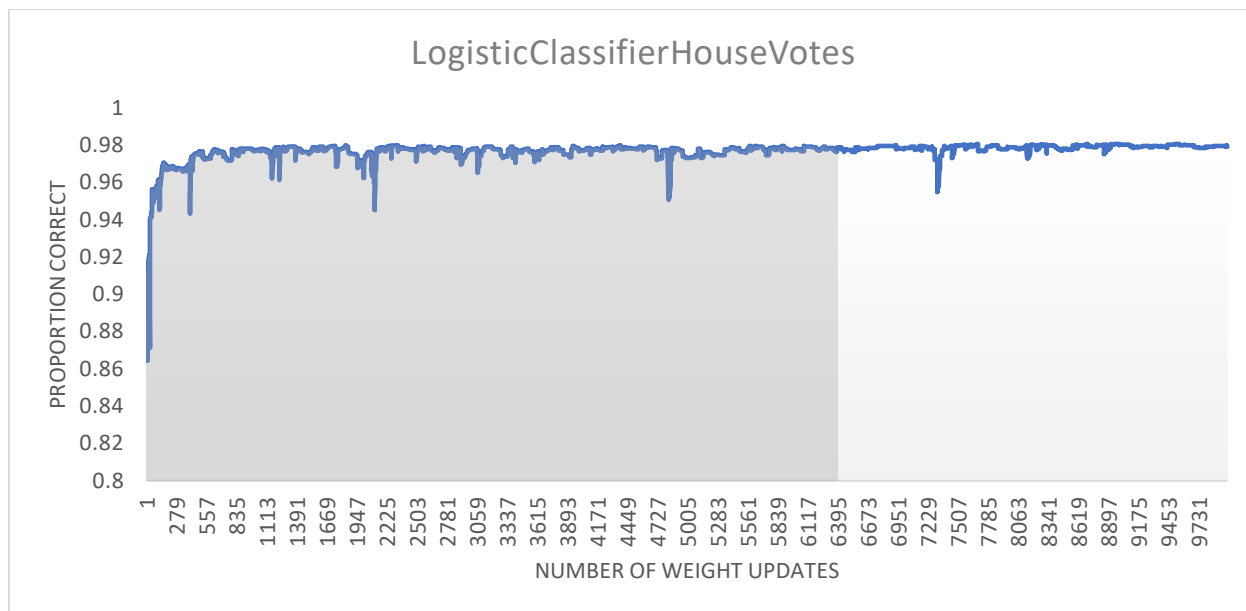
Test Data used: Earthquake-Clean
Number of Steps: 10,000
alpha: 0.95

7) LogisticClassifierEarthquakeNoisyDecaying



Classifier used: Logistic Classifier
Test Data used: Earthquake-Noisy
Number of Steps: 10,000
alpha: 0

8) LogisticClassifierHouseVotes



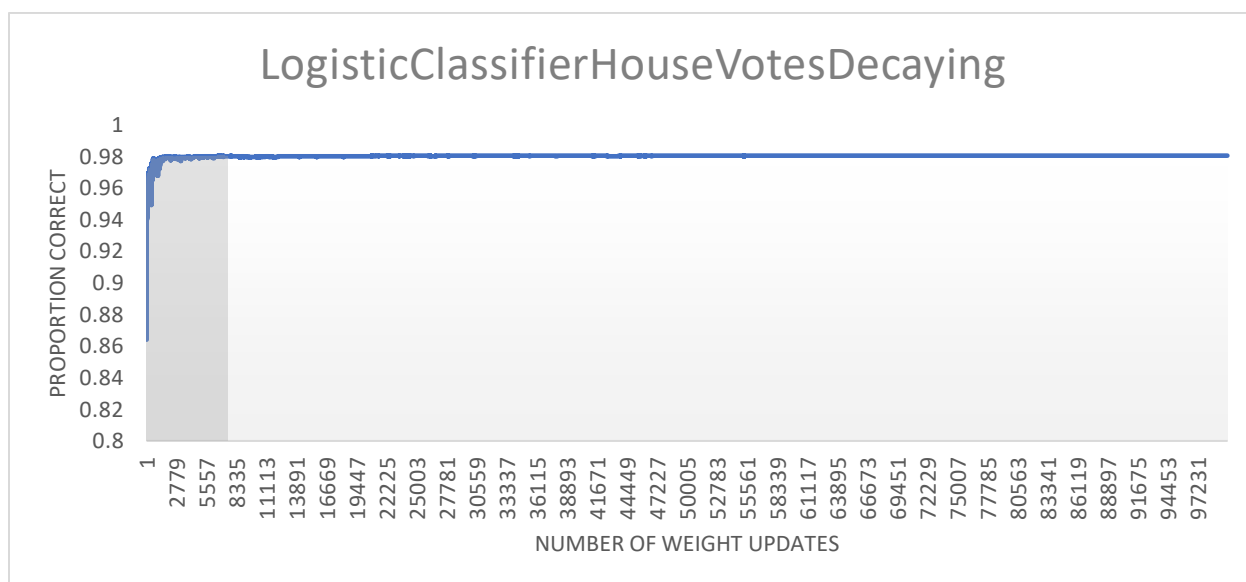
Classifier used: Logistic Classifier

Test Data used: House-votes-84

Number of Steps: 10,000

alpha: 0.95

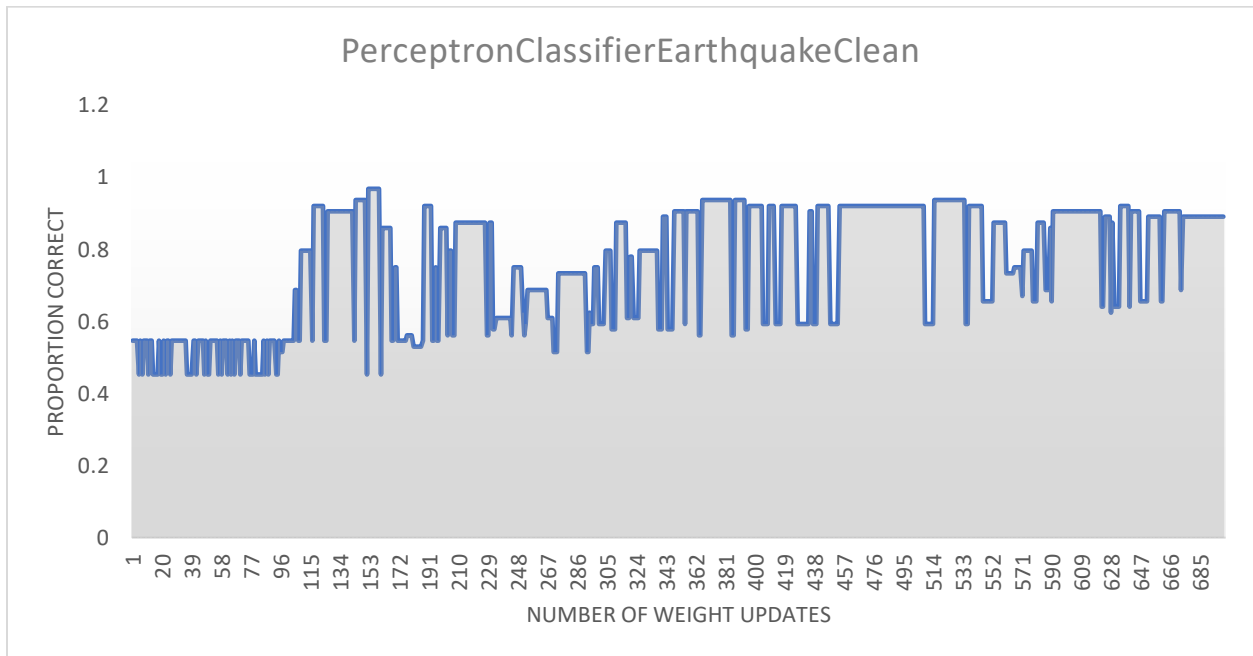
9) LogisticClassifierHouseVotesDecaying



Classifier used: Logistic Classifier

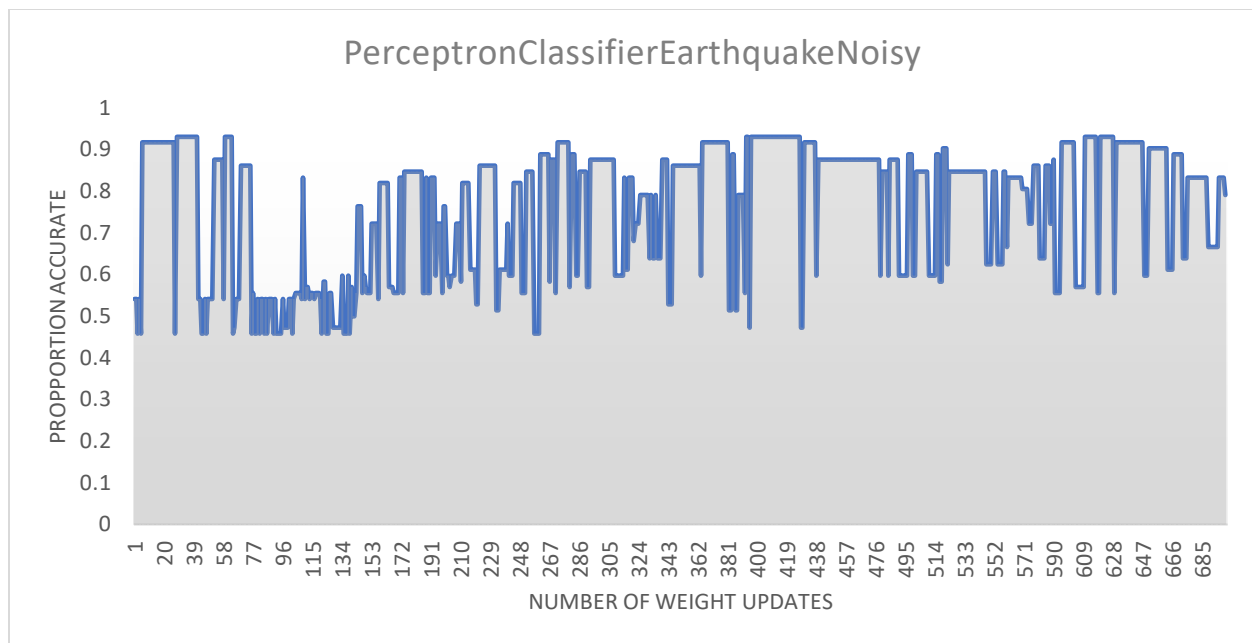
Test Data used: House-votes-84
Number of Steps: 10,000
alpha: 0

10) PerceptronClassifierEarthquakeClean



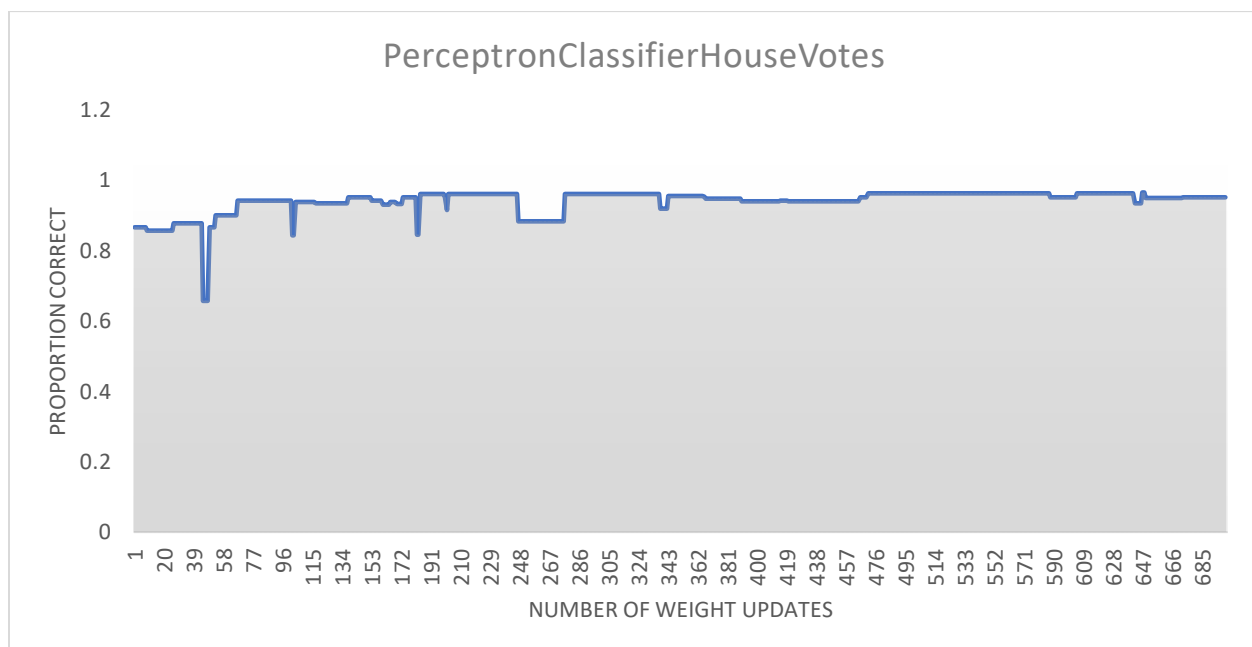
Classifier used: Perceptron Classifier
Test Data used: Earthquake-Clean
Number of Steps: 700
alpha: 0.95

11) PerceptronClassifierEarthquakeNoisy



Classifier used: Perceptron Classifier
 Test Data used: Earthquake-Noisy
 Number of Steps: 700
 alpha: 0.95

12) PerceptronClassifierHouseVotes



Classifier used: Perceptron Classifier

Test Data used: House-votes-84
Number of Steps: 700
 α : 0.95