**Test Discussion:**

I used several tests to verify the correctness of my code: within-code tests, console-based tests and file-based tests.

I used within-code tests to ensure every line I wrote was outputting expected results before moving on with my code. Doing things this way helped me virtually guaranteed myself to stay on track throughout.

Console-based codes allowed me to test for the overall correctness of my program by inputting in different training data and test data. Doing this helped me identify how well my program was performing. Since my program is a pattern recognition program, it was not right throughout. However, it got more than 80% of the tags write, giving me confidence in its recognition capability.

File-based methods allowed me to carry the above tests but in a different manner, allowing me to see in a text file how well my program was performing.

Overall, the tests I used proved that my program was running with a significant amount of accuracy.