

Authors: Chipso Chibbamulilo and Chikwanda Chisha

PSET 5(Hidden Markov Model)

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Question 2

Although the results bore inconsistencies, the majority of them matched the given input. The hard coded model did not have enough data for training and therefore for making correct predictions. Therefore, we decided that our Viterbi worked okay and we were satisfied with the results. We decided to move on to the next steps of the Pset.

Discussion

Although we did bear some discrepancies, overall, the test sentences provided were almost always rightly determined by the model when we used -100 as our unseen value (we had a 96.5% accuracy). We realized that reducing the unseen value produced unreliable results. When testing with -1000, we got the same results as that with -100, which was comparable to the correct tags. However, with the use of -10, we realized that results gotten were mostly wrong (about a 20% accuracy). This shows that the unseen value should be any reasonable value that is capable of offering a reasonable distinction between scores close in value.

Therefore we can conclude that the higher the unseen value, the greater the accuracy and the lower the unseen value, the lesser the accuracy.