Report : Assignment – 4

HMM (Hidden Markov Model) and Bigram Probabilities (Viterbi algorithm)

When I ran the Viterbi Algorithm with a Hidden Markov Model and Bigram Probabilities (after training it on the entire training set), I got a recall of 39.39% and a precision of 53.69% , and therefore an F1-measure of 45.44%.

However, when I separated the dataset into a training set (80%) and a dev set (rest unseen 20%), trained on the new training set, and tested on the dev set, I got a recall of 21.21% and a precision of 51.33%, and therefore an F1-measure of 29.84%. This was after using the value of k from Add-k smoothing which returned the best F1-measure (k = 0.05).

Therefore, I predict the F1-measure on the test set to be around 30%.