

6. Results:

In Rubine classifier, the classification results is solely based on the scores that are coming from the geometrical features of the sketched digits, so it does not consider the real database of zipcode for US or NY, which leads to erroneous results since in this case the testing sketches may not completely match with the training data. The Rubine classifier gives 35464 as the classified zipcode. There is just one number matching with the true zipcode input which is 14263.

The HMM, on the other hand, uses the probabilities of the state transitions given one specific state, the probability of having a true state knowing the observation, and the probability of a starting state for finding the most probable path to a chain of states. In other words, forecast will not always be a better way to classify a data that is considered to be a chain of classes. The Viterbi algorithm for NY state, classifies the zipcode as 14242 with three correct classes, and for US classifies it as 21666 with one correct class.