**SVM Classifier**

Training an SVM classifier with a polynomial kernel with parameter 2 on the training set and testing on the test set for “Human Activity Recognition” and “VidTIMIT” datasets.

In “Human Activity Recognition” there are 6 class labels and for each class label an SVM classifier is trained using one against the rest approach. Likewise, in “VidTIMIT” dataset there are 25 class labels and similar approach has been followed for training the SVM classifiers.

Matlab’s inbuilt function ‘fitcsvm’ is used for training the SVM with train data and similarly, ‘predict’ function is used for assigning label to each data sample after training.

For training a classifier at a time, the main class label is taken as it is and the other class labels are taken as ‘-1’. In case of multiple labels resulting on a single sample by training all the classifiers, the label with the maximum value is selected.

For “Human Activity Recognition” dataset, an accuracy of 95.9281% is observed. And for “VidTIMIT” dataset, an accuracy of 98.8000% is observed.