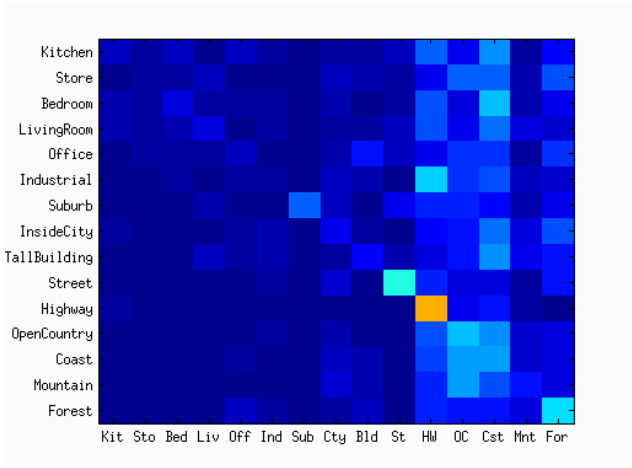
Assignment 3 Report
Parag Jain : CS13M1008

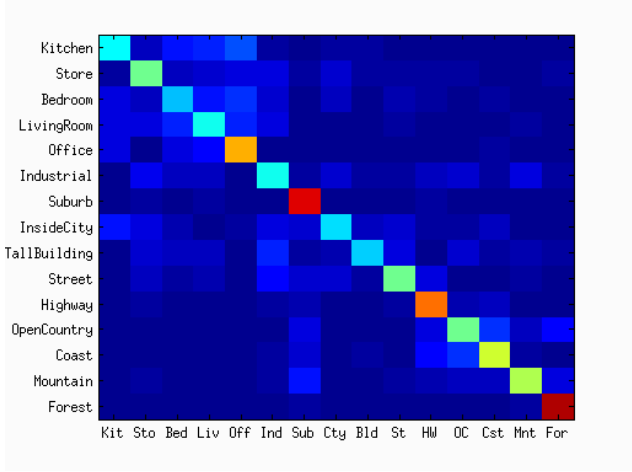
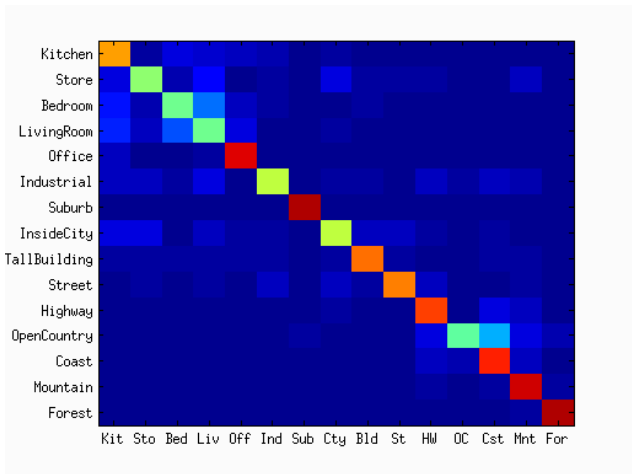
Method	Accuracy	Parameter
Tiny image + Nearest Neighbor	0.191	I have used 1 Nearest neighbour ,I have tried with 3NN but it did not increased the accuracy much.
Bag of SIFTs+ NearestNeighbor	0.527	With 1NN and visual vocabulary 400
Bag of SIFTs+Linear SVM	0.705	Vocabulary 400 and regularization parameter lambda = 0.001 for vl_svmtrain.
Bag of SIFTs+Chi squared kernel SVM	0.753	I have used libsvm library to implement this.

Intution for using Chi-squared kernel was that it gives distance between two histograms which is what we exactly wants in bag of word.Below is the kernel function which is implemented,

$$k(x,y) = 1 - \sum_{i=1}^{n} \frac{(x_i - y_i)^2}{\frac{1}{2}(x_i + y_i)}$$

Also I have tried with more vocabulary size till 600 but it did not increased the performance.

Method	Confusion matrix
Tiny image + Nearest Neighbor	

Bag of SIFTs+ NearestNeighbor	
Bag of SIFTs+Linear SVM	
Bag of SIFTs+Chi squared kernel SVM