

Homework 2

Method	LDA	OSR	LDA-OSR	Kmeans-OSR	Gaussian
Dev Accuracy	0.8767	0.2004	0.7717	0.8329	0.8679
Eval Accuracy	0.7667	0.0417	0.6458	0.7142	0.7408

For III, the accuracy is much better than II. Also, II takes a long time to do the calculation. The reason for this is II has a large dictionary which will lead to a higher variance in OSR. The LDA reduces the number of dimensions to a more manageable number that will have a higher accuracy and computation speed.

For IV, the computation speed improved, because kmeans use only 55 centroids which is smaller dimension compared to LDA.

For V, it has best result. With the equal prior for all classes and shared covariance, it has best accuracy and speed.