

Programming Assignment #2

1) Feature Extraction

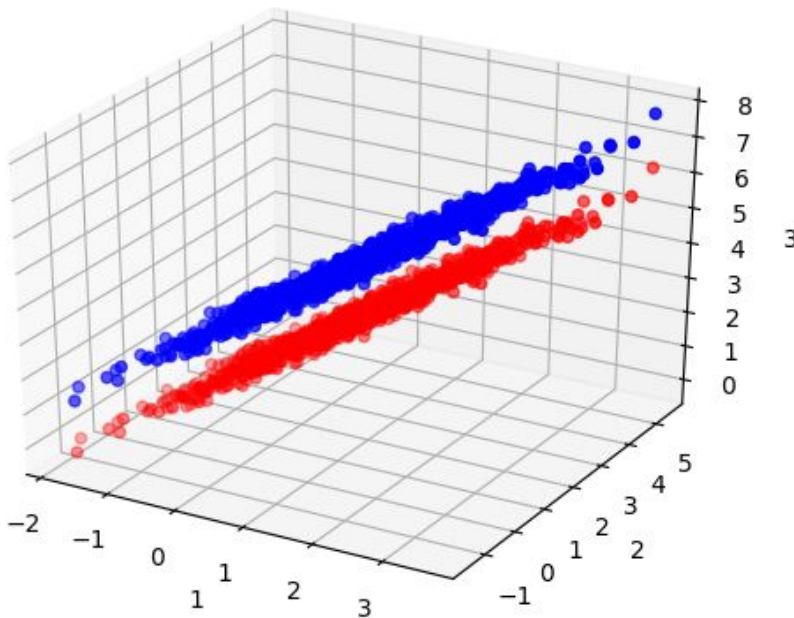
Performing PCA

Class	Precision	Recall	F measure
1	0.611940298507	0.615	0.613466334165
2	0.613065326633	0.61	0.611528822055

Performing LDA

Class	Precision	Recall	F measure
1	1.0	1.0	1.0
2	1.0	1.0	1.0

LDA performs better than PCA here. LDA also cares about maximising the interclass distance while PCA just maximises the variance. From visualizing the dataset we can say that LDA is better



3) SVM

- 1) Linear Kernel : C=10
- 2) Poly Kernel : C=1, degree=2, coef0=1, gamma=0.01
- 3) RBF Kernel : C=10, gamma=0.01
- 4) Sigmoid : coef0=0, C=10, gamma=0.001

Results

Linear : 0.591973733061

Poly : 0.657467683587

Gaussian : 0.680392375081

Sigmoid : 0.606680639993