

# Assignment-5 : Pattern Recognition

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# 1 Fisher-LDA

LDA

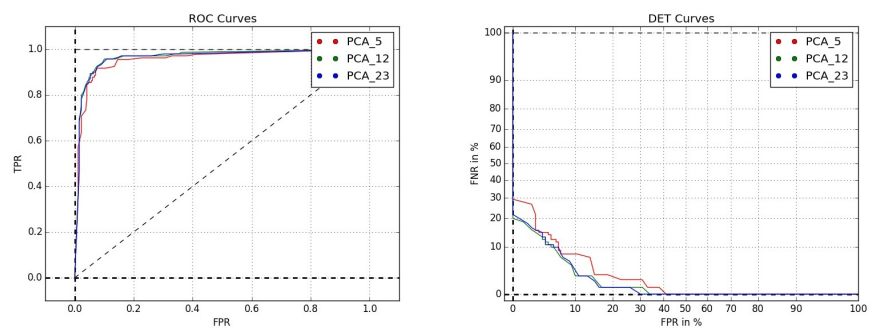


Figure 1: Number of PCA components

Confusion Matrix on Test Data (PCA-23)			
	Forest	Street	Highway
Forest	43	5	1
Street	0	40	3
Highway	0	5	34

## 2 Perceptrons

Perceptrons - ROC on validation data

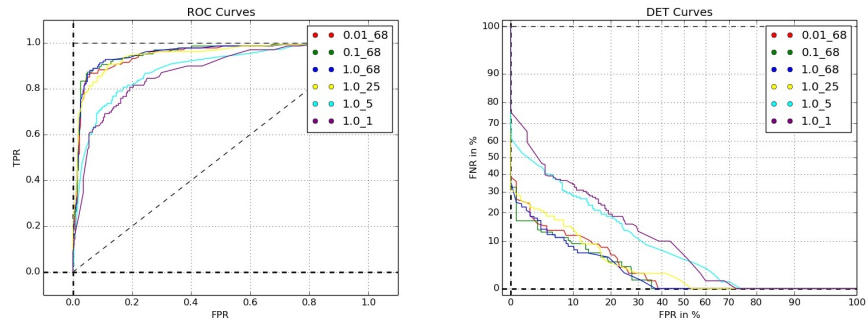


Figure 2: Number of PCA components

Confusion Matrix on Test Data			
	Forest	Street	Highway
Forest	46	2	1
Street	0	42	1
Highway	2	10	27

### 3 SVMs

SVMs

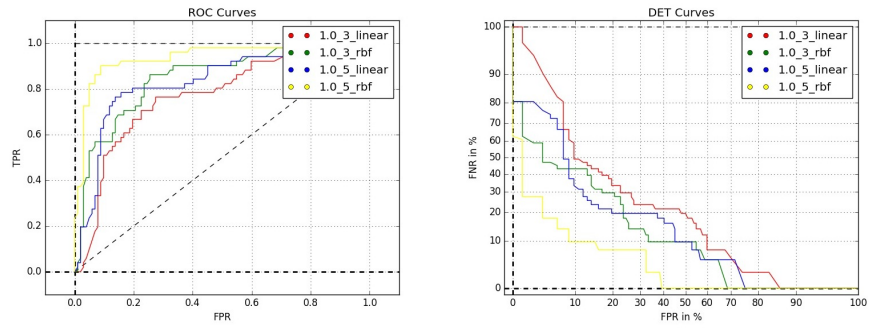


Figure 3: < learning-rate > - < epochs >

Confusion Matrix on Test Data - linear			
	1	5	z
1	11	4	2
5	3	13	1
z	2	1	14

## 4 Neural Networks

NN - Effect of means

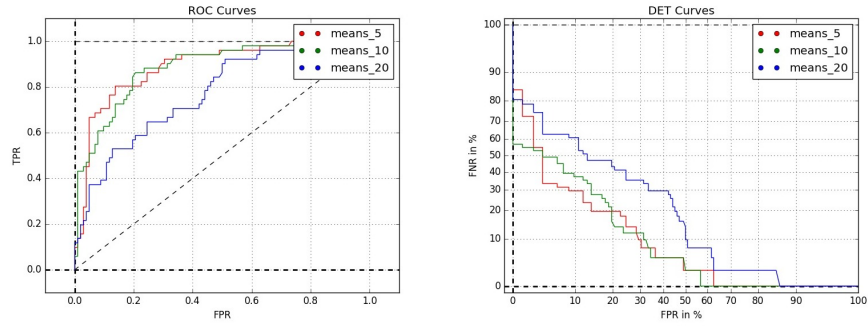


Figure 4: < learning-rate > - < epochs >

NN - Effect of depth

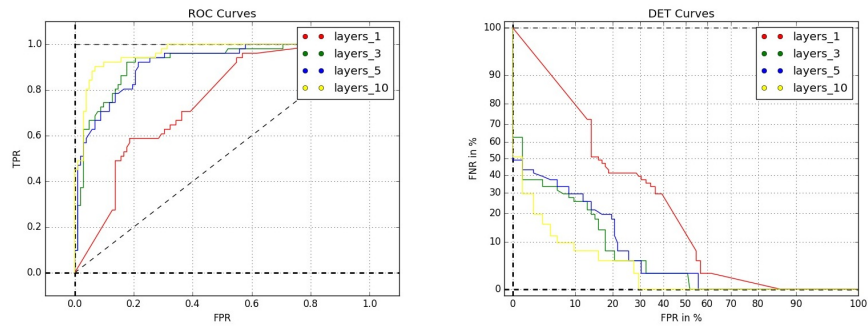


Figure 5: < learning-rate > - < epochs >

Confusion Matrix on Test Data - 2000 iter			
	1	5	z
1	15	1	1
5	0	14	3
z	1	0	16

# NN - effect of iterations

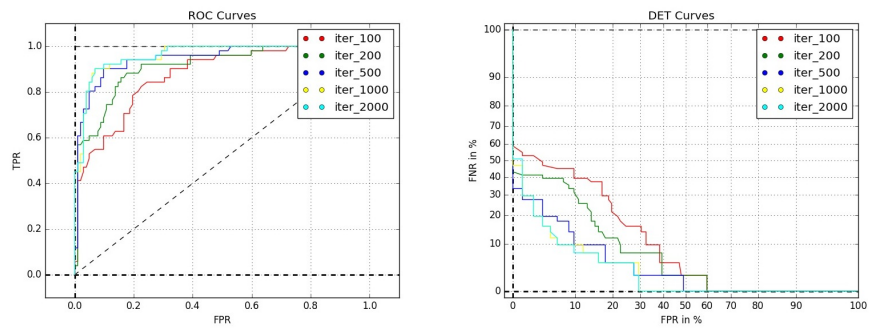


Figure 6: < learning-rate > - < epochs >