

CS5691: Assignment 2

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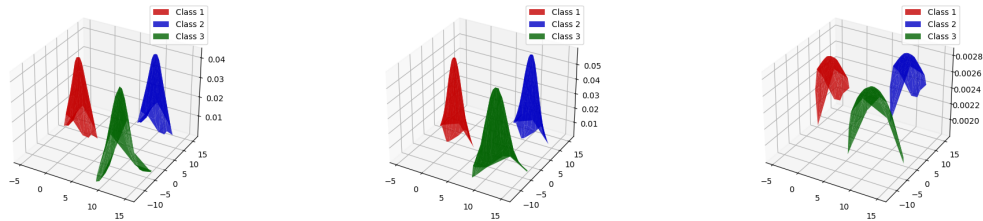
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B. Bayesian Classifier

1. Linearly Separable Data

- We observe that classification of linearly separable data can be done very easily. We get 100% accuracy.

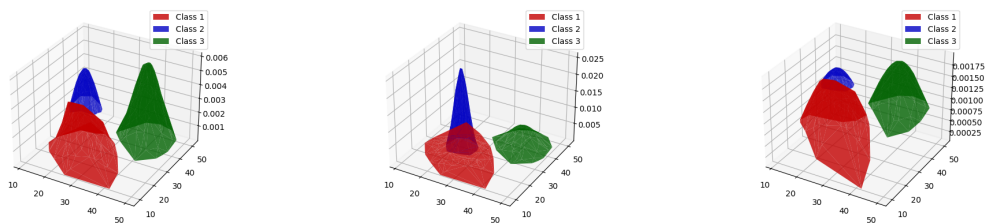
Figure 1: Plot of PDF for case 1, 2, 3 respectively



2. Non-Linearly Separable Data

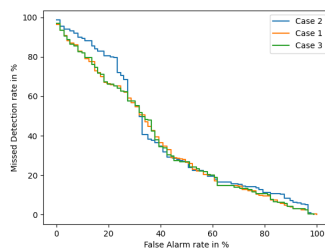
- Below is the Gaussian PDF plot for Non-Linearly separable data for different cases

Figure 2: Plot of PDF for case 1, 2, 3 respectively



- DET curve for Non-Linearly separable data

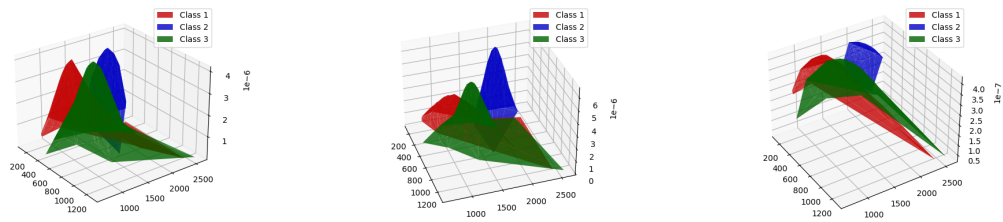
Figure 3: DET Plot



3. Real Data

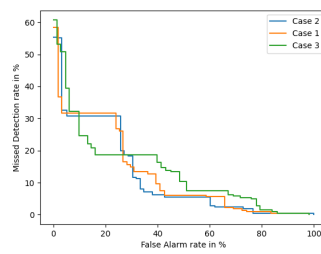
- Below is the Gaussian PDF plot for Real data for different cases

Figure 4: Plot of PDF for case 1, 2, 3 respectively



- DET curve for Real data

Figure 5: DET Plot



- Confusion Matrix for Real data

Figure 6: Confusion Matrix

