

# Project 2 \*

February 22, 2016

## 1 Dataset and Problem Statement

### 1.1 Part A

## 2 Modeling Text Data and Feature Extraction

### 2.1 Part A

## 3 Feature Selection

### 3.1 Part A

## 4 Learning Algorithms

### 4.1 Part A

## 5 Multi-class Classification

### 5.1 Part I

The results for Multi-class classification are shown in the tables below. Table 1 contains the results for One vs Rest method and Table 2 contains the results for One vs One method.

Learning Algorithm	Accuracy	Precision	Recall
Gaussian Naive Bayes	63.32	64.50	63.32
Linear SVM	81.40	81.50	81.40

Table 1: One vs Rest

Learning Algorithm	Accuracy	Precision	Recall
Gaussian Naive Bayes	64.53	65.47	64.53
Linear SVM	80.89	81.28	80.89

Table 2: One vs One

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The confusion matrix for One vs One methods are shown below in figure 1 and Confusion matrix for One vs Rest methods are in figure 2

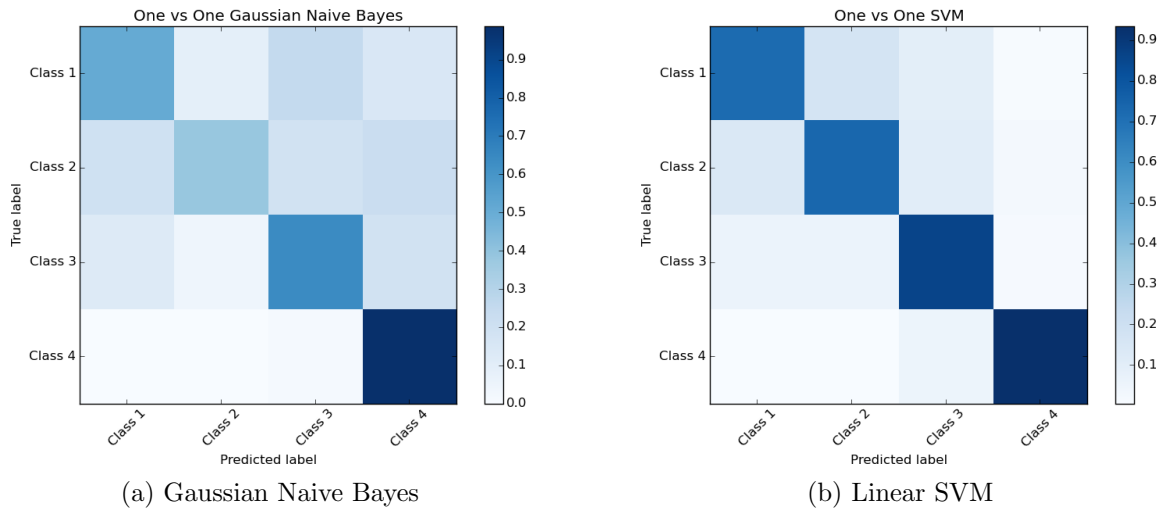


Figure 1: Confusion Matrix for One vs One Method

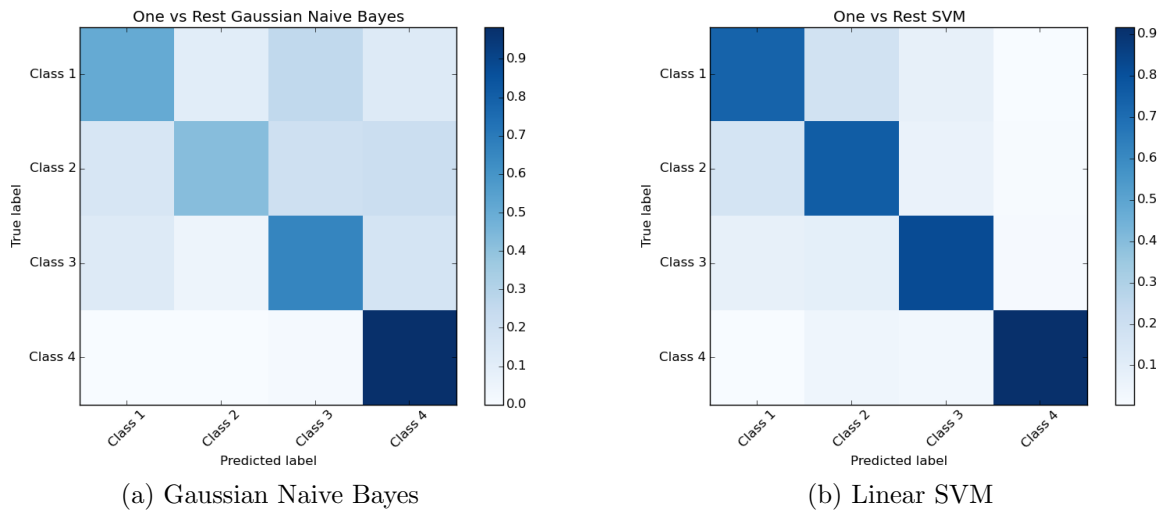


Figure 2: Confusion Matrix for One vs Rest Method