**Machine Learning Assignmnet-3**

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**Naïve Bayes Classifier with Stop Words :**

**Accuracy : 83.744**

Positive Precision : 0.889762 Negative Precision : 0.797503

Positive Recall : 0.77032 Negative Recall : 0.90456

Positive F1Score : 0.825744 Negative F1Score : 0.847665

**Naïve Bayes Classifier without Stop Words :**

**Accuracy : 84.7**

Positive Precision : 0.925073 Negative Precision : 0.793173

Positive Recall : 0.7552 Negative Recall : 0.9388

Positive F1Score : 0.831535 Negative F1Score : 0.859864

**Binary multinominal naive Bayes :**

**Accuracy : 86.072**

Positive Precision : 0.884137 Negative Precision : 0.839994

Positive Recall : 0.83024 Negative Recall : 0.8912

Positive F1Score : 0.856341 Negative F1Score : 0.86484

For sentiment classification and a number of other text classification tasks, whether a word occurs or not seems to matter more than its frequency. Thus it often improves performance to clip the word counts in each document. So it increases the accuracy.