

AML Homework 2

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1. We created a C++ SVM that ran several times, coming up with accuracies of:
 - a. SVM training accuracy: 99.515%
 - b. SVM testing accuracy: 99.5185%
2. We created a C++ Naïve-Bayes classifier, coming up with accuracies of:
 - a. Naive-Bayes training accuracy: 61.2551%
 - b. Naive-Bayes testing accuracy: 60.9505%
3. From both the training and the testing accuracy, it is obvious to denote that the SVM was more accurate than the Naïve-Bayes classifier. The reasoning behind this observation is that the SVM aims to find a global minima of error, while a Naïve-Bayes does not. A Naïve-Bayes might very well find a local minima; this happens because it assumes the data is normally distributed and then tries to fit the classifier to the distribution. The SVM attempts to fit to the dataset's actual distribution.