## Assignment

Implement a support vector machine (SVM) classifier. For each week, your feature set is  $(\mu, \sigma)$  for that week. Use your labels (you will have 52 labels per year for each week) from year 1 to train your classifier and predict labels for year 2.

## Questions:

- 1. implement a linear SVM. What is the accuracy of your SVM for year 2?
- 2. compute the confusion matrix for year 2
- 3. what is true positive rate and true negative rate for year 2?
- 4. implement a Gaussian SVM and compute its accuracy for year 2? Is it better than linear SVM (use default values for parameters)
- 5. implement polynomial SVM for degree 2 and compute its accuracy? Is it better than linear SVM?
- 6. implement a trading strategy based on your labels (from linear SVM) for year 2 and compare the performance with the "buy-and-hold" strategy. Which strategy results in a larger amount at the end of the year?

CS-677 Assignment: SVM