Assignment

Implement a support vector machine (SVM) classifier. For each week, your feature set is (μ, σ) 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?