

Part 0:

1. a) I obtained an accuracy of 99.24%.

b) The example solution is different from mine due to uncontrolled learning and classification layers. These layers train and classify data sets by using MATLAB built-in functions which might do something slightly different each time.

c) A good way to present the classification results visually is to show a graph that has accuracy percentage for each class as well as the percentage data from other classes has been classified into different classes.

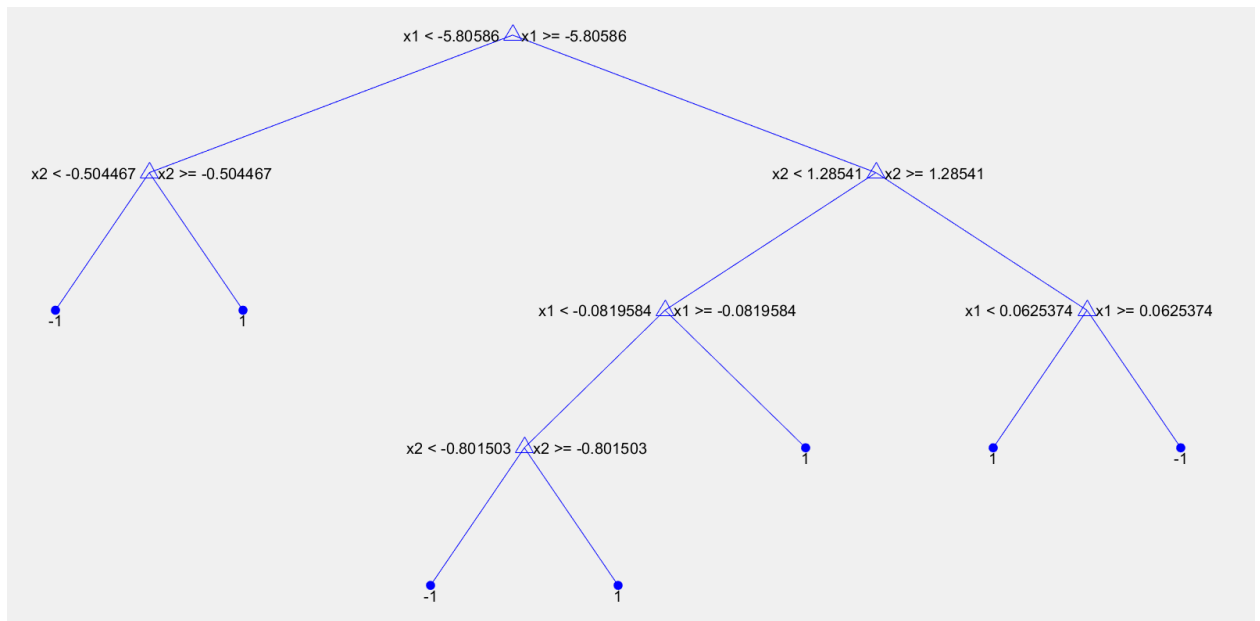
Part 1:

1. SVM Classifier Comparison

The difference in performance between the SVM and decision tree approaches is not that big but is still some. Decision tree classifiers have much lower percentage error than the ones SVM classifier have as shown below. However, there is almost no difference between unpruned and pruned decision tree. It's probably because the feature dimensions are too small, and the complexity is low. Pruned decision tree was not able to perform its advantages over unpruned decision tree. The two graphs shown in the end are the two decision trees. I pick '1' as my prune level which is shown in the last figure as well.

	Percentage Error (Training Set)	Percentage Error (Test Set)
SVM Classifier	1%	0%
Decision Tree Classifier	0.25%	0%
Pruned Decision Tree Classifier	0.25%	0%

Decision Tree Classifier Graph



Prune Decision Tree Classifier Graph

