Assignment 4, Due Apr 5

1. Read Section 24.3. Implement the edge detector for finding step edges at arbitrary orientations discussed there and demonstrate it on some examples. You may find the Matlab functions conv, conv2, filter, filter2 relevant. Note that the basic Matlab demo shows the results of using the Sobel filter.

2. Problem 24.3 from the book.

3. Problem 24.4 from the book.

4. Implement a classifier for handwritten digit recognition. You can choose what classifier to implement. A training set will be available on the course web page for you to use in training your algorithm. A separate data set will be made available later for testing the performance of your classifier.

You may work on this assignment in groups of up to 3 people. While any programming language could be used for this or other assignments, you may find that MATLAB is the most convenient for this assignment. The TAs will be available to provide MATLAB help in the sections.