HW 1 (due Sep 5)

Implement a weighted *k*-nearest neighbor algorithm for the available hand-written training data. Take 100 training examples from each file. Test the algorithm on the all testing data. Provide accuracy and confusion matrices for the following cases:

1) $k = 1$ and 5; all the weights are equal 1.
2) *MATH 662 only:* $k = 1$ and 5; all the weights are calculated according to the formula:

$$w_i = \frac{1}{d(x_q, x_i)^2 + \varepsilon}, \ \varepsilon = 1.$$

Repeat the runs with 1000 training examples from each file. Record testing time for each case.