

## Homework problem 2

**Problem ESL 2.7** Compare classification performance of k-NN and linear regression on the `zipcode`<sup>1</sup> data, on the task of separating the digits 2 and 3. Use  $k \in \{1, 3, 5, 7, 15\}$ . Plot training and test error for k-NN choices and linear regression. Comment on the shape of the training and test error graphs of k-NN, and the training and test errors of linear regression.

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<sup>1</sup>Training: <http://statweb.stanford.edu/~hastie/ElemStatLearn/datasets/zip.train.gz>  
Testing: <http://statweb.stanford.edu/~hastie/ElemStatLearn/datasets/zip.test.gz>  
Info: <http://statweb.stanford.edu/~hastie/ElemStatLearn/datasets/zip.info>