

Math 680, Fall 2020
Homework 5 Due: Friday, 12/4/2020

1. Download the ZIP code data set from the website of our textbook. Classify 2's and 3's for zip code using the linear SVM, Gaussian kernel SVM, and polynomial kernel SVM. Fit the training data using a sequence of tuning parameters and find the one which gives the best error on the test set. You may consider using the R package *e1071*.
2. Classify “1”, “2” and “3” for the zip code using the classification tree in R. Report both the training error and test error. You may consider using the R package *tree*.
- 3 Exercise 4.6 in our textbook. This is a **Bonus** problem. You can earn additional 20 points by completing the problem.