STT 811

Homework 5

Due Friday, March 17, at 11:59:59 pm

1. **ISLR2** 5.6 (you don't need to do the subparts as listed– Simply estimate 95% confidence intervals for the parameters using (a) the output of the GLM summary and (b) bootstrapping).

2. **ISLR2** 8.4

3. **ISLR2** 8.9(a)-(e)

4. For the OJ dataset create a (a) logistic regression model, (b) a Naïve Bayes model, and (c) a decision tree model, using PriceDiff and LoyalCH for each. Next, ensemble the predictions with a simple average. Create a confusion matrix for the ensembled model and compare the accuracies.

5. Re-do the decision tree in 8.9 with bagging (1,000 bootstrapped samples of the train set). Compare the out-of-bag accuracy to the original decision tree.