

5.1. Problem: Using Cross Validation

We are going to use the same data as in Homework 1.

Previously, we used the “eye-ball” method to choose k for a k NN fit for mileage predicting price.

Use 5-fold cross-validation to choose k .

How does your fit compare with the eyeball method?

Plot the data and then add the fit using the k you chose using cross-validation and the k you choose by eye-ball.

Use k NN with the k you chose using cross-validation to get a prediction for a used car with 100,000 miles on it.

Use all the observations as training data to get your prediction (given your choice of k).

6.1. Problem: kNN, Cars Data with Mileage and Year

Use kNN to get a prediction for a 2008 car with 75,000 miles on it!

Remember:

(i)

Use cross-validation to choose k .

(ii)

Scale your x 's !!

Is your predictive accuracy better using (mileage,year) than it was with just mileage?