Homework 3 Proposal

1. To answer this, we think a polynomial term for income could indicate whether the relationship between Income and Score is convex, linear, or concave. Convexity would suggest that the effect of income has diminishing returns as it increases.
2. To answer this, we could look at the beta coefficient for % of English learners. If negative, that would suggest that there is a relationship between English as a second language, and lower scores.
3. To answer this, we will examine the beta coefficients of our final model (paired with any polynomial expansions or related basis functions) and determine which variables share a positive relationship with scores on the Stanford 9 test.
4. To answer this, we will use cross validation on our final model to estimate it’s out of sample predictive power, and we will do the same on other models that we considered throughout the study.