**Week 7 Homework**

It appears that as the n\_estimators parameter increases, the test mean squared error becomes "worse", ~0.4543 in model 1 (with a lower n\_estimators: 10) as opposed to ~0.4639 in model 2 (with a higher n\_estimators: 15). Though, this does not appear to be a very influential parameter. A higher learning rate appears to make the model "worse", and it appears this parameter has a high effect on the mean squared error of the model. When I increased the learning rate to 6 in model 3 as opposed to 1 in model 1, the mean squared error increased by an enormous amount ~17504013034859! The best performing model I have found in this homework assignment appears to be model 5, which has a mean squared error of ~0.4287, a lower n\_estimators (5) and a lower learning rate (0.5).