At start we have implemented linear regression and polynomial regression the results are not good. After that we tried more advance methods like Decision Tree Regressor and Random Forest Regressor. In Decision Tree Regressor the model shown quit good results then previous polynomial results but still model not perform excellent on test data set. It achieve 0.77 test score and 1.00 training data score. Because the difference quit a big we come to know that the model overfit on the data.

Part 4:

As you can see the above parts there are number of methods but not perform state of the art. One of method of prediction is Random forest regression. It has some advantage of dealing with over fit. In it we choose number of trees that is directly made effect of regularization. If the less you chose tress the more model will go towards linearization. You can change tress number n\_estimators in the code to check the different result of accuracy. It perform good then other methods.

All these methods perform different in different problems here a some over view of these methods

