1. Report the results using the table below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Model # | Model | RMSE (R) | Number of Features (n) | Score | Beat Zillow? (Yes/No) |
| 1 | Linear Regression (+Regularization) | 0.023 | 90275 | 1.023 | Yes |
| 2 | Decision Tree | 0.001 | 90275 | 1.001 | No |
| 3 | Random Forest | 0.196 | 90275 | 1.196 | Yes |
| 4 | XGBoost | 0.017 | 90275 | 1.017 | Yes |
| 5 | Modelw | 0.196 | 90275 | 1.196 | Yes |
| 6 | Modelavg | 0.073 | 90275 | 1.073 | Yes |

\*I was not able to finish executing XG Boost in time for completion. In order to improve this, I should have performed better feature extraction to reduce the number of features to input.

For my weighted model, because my random forest model significantly and substantially outperformed the other models, I chose to simply use it for the entire weighting. Using different weights for other models would help improve performance if the individual performances were similar to each other; however, because my random forest model substantially outperformed my other models, I chose to weigh it with a value of 1.

Of the models, my best model was the Random Forest model, with a score value of 1.196.

Overall Zillow Mean: 0.011398