Name: **Tushar Muley**

Assignment: **4.2 Portfolio Milestone 1 ReadMe Files**

Date: **Jan 9, 2022**

**Austin Housing Market Prediction Analysis**

The Austin, Texas Metro area has seen an increase in population of 34% compared to the 2010 Census confirmed by the most recent Census data released in May of 2021. These new settlers are looking for affordable housing as they move into the newest tech hub outside of the traditional hubs like Silicon Valley and Seattle. Our team was tasked with building a machine learning model that will take our housing data and train against that data to make predictions on home prices in the Austin area. We were given a data set with over 15,000 rows all containing various features and information that Zillow contains for analysis.

Our goal was to accurately predict the prices of homes in the Austin market for families and individuals coming to work in the rapidly growing area. In the beginning we had to analyze the data and begin our preparation for the model we built. Features where updated from human language to model ready input. With further analysis we then began to split and train the data trying to add or delete irrelevant features from the training data.

To ensure we were getting the most accurate predictions of the home prices. We ended up trying three different models starting at 36% accuracy and ending with our most accurate model at 58%, which was very close to our initial target of 60%. From our analysis, we believe we have created a stepping stone to provide value to our customers when searching for a home in the Austin Metro area. This model could be used in other markets to provide value, insight and drive more views to Zillow.com. New users could look for a new home as well as analyze markets that are rapidly increasing in price.