

STAT 1361: Non-Technical Report

To the naked eye, there's a multitude of things at hand that influence the price of a house. It can juggle between things as unbelievable as natural disasters, and even crime rates. Here, I consider the price of houses in Virginia and Pennsylvania, and the major factors that influence the price of a house. I seek to find and predict using said important factors. Intuitively, when we think about the price of a house, we are tempted to believe that the exterior design of a house plays a big role, but that's not actually the case. In fact, the key features that contribute to the price of a house lie inside the house. Factors like whether the house is made of brick or metal are certainly contributing to some of the cost of a house, but it is easily overshadowed by factors such as the number of bedrooms, and the square footage of the house. Additionally, when we think about the cost of a house, it can differ from state to state. Think about the housing bubble in California, when compared to housing prices in states like New Jersey, a house of the same size can cost hundreds of thousands of dollars more in California. A similar case can be made here. In the case of Virginia and Pennsylvania, the state plays a huge role in determining the housing price. Generally, if there is a huge demand for jobs in a certain state, the average house price will be pretty high. Consider California and New York, each state has a high cost of living. One is the center of technology, and the other being the center of business, as a result the demand for diligent, talented people is high, and the cost of houses increases. Thus, in considering zip code, its relevance pales in comparison to the significance of the average income of a household in a given zip code, as the typical trend is that families with higher incomes will live in houses that cost more. Additionally, the income in a given zip code, covers the information that zip code handles. Average income in a given zip code effectively kills two birds with one stone. Another factor to consider is the presence of a basement in a home, and the description of a home.

Although the basement itself does contribute to the size of a house, as well as the description of the house itself. Despite the validity of an argument that both factors contribute to the price of a house. The size of a house can encapsulates both. For one thing with the description of a house, these details can often be inferred from the size of the house and the number of bedrooms and bathrooms. For example, a multiple family house would be expected to have a slightly higher size and more bedrooms and bathrooms than a single-family house. In the future, there should be more features incorporated. For example, more fine-grained details about the interior of the house, as well as the region the house is in. As more rural region will typically have lower living costs than houses in suburban areas. Additionally, considering factors like the number of schools nearby or the number of nearby houses. The usual trend is that more private areas will have a lower number of houses nearby as well as fewer schools nearby, vice versa. To add on, the prices of houses between more isolated areas and more densely populated areas differ by quite a bit. Overall, through statistical analysis, and intuition, some good predictors and bad ones were both kept and removed and bring us one step closer to beating Zillow in predicting house prices.