When tasked with predicting housing prices in Pittsburgh and Richmond, we applied several statistical methods, and chose one that we feel confident about. It used only square footage, whether the house was in Pittsburgh or Richmond, and the material used to construct the roof to generate predictions. In addition to supplying predictions from this model, the following findings emerged from our analysis:

1. If one had to predict housing price using only one variable, it should be square footage. We consistently found that square footage is an excellent estimator of price, and is clearly better than its related metric, lot size. Consider the following: Houses A and B sit on separate lots of size 1000 square feet. House A has five stories, but House B only has one. If we viewed these houses from the perspective of lot size, they would be identical. But square footage correctly considers the space (and subsequently price) contributed by additional floors.
2. We also found that the state a house is in plays a noticeable difference in price. Again presume that we are looking at two houses, but this time they are identical in every way except for location. House A is located in Richmond, and House B is located in Pittsburgh. Interestingly, although the houses are otherwise identical, we can consistently expect that House A will be priced higher than House B.
3. A third reliable predictor of housing price is roofing material: in particular, whether slate was used or not. If slate was the material of choice to construct the roof, we can expect that house to cost more than if any of the materials were used. This is likely the case because slate is more of a designer material. If slate was used, then it is likely that the house is more luxurious than average.