

## Predict Philly Property Value

Home property investment is an attractive way to invest money. In addition to brick-and-mortar appeal, these investments tend to be safer than stock investments over the long-term<sup>1</sup>. Individuals in the home property market may want to know the value of their home in order to make buying and selling decisions. They also may wish to know which features of a home (location, space, amenities) contribute most to property value. Outside of the buying-and-selling market, homeowners may want to estimate property value to verify that they pay a fair property (real estate) tax.

In this project, I will predict the value of single-family homes in Philadelphia based on home location and features, such as square footage, heating/cooling type, age, garage space, view and overall condition of the interior and exterior. I plan to build a model that can 1) estimate property value based on these features, and 2) I will use that model to determine which features drive up home value. To deliver on these two fronts, I will provide code that can take home features as input, and output estimated property value. I will highlight which features drive up home value in a written report and slide deck.

OpenDataPhilly<sup>2</sup> and the City of Philadelphia Office of Property Assessment provide recent public records of individual properties in Philadelphia<sup>3,4</sup>. The Office of Property Assessment uses home location and features to estimate market value, which ultimately determines property tax<sup>5</sup>. This dataset offers an opportunity to make property value assessment easy for individuals, and to determine which features of a home in the city contribute most to market value. This dataset includes many types of properties (residential, commercial, land). In this project I will focus solely on finished single-family homes.

### References and Data Sources

1. Rao, Krishna. (2014, May 8). Is a Home a Good Investment? Zillow Research. <https://www.zillow.com/research/returns-to-housing-6874/>
2. OpenDataPhilly. <https://www.opendataphilly.org/dataset>
3. Property records. <https://www.phila.gov/property/data/#>
4. Property records metadata. <https://metadata.phila.gov/#home/datasetdetails/5543865f20583086178c4ee5/presentationdetails/55d624fdad35c7e854cb21a4/>
5. Office of Property Assessment, City of Philadelphia. "What we do." <https://www.phila.gov/departments/office-of-property-assessment/>