Houston Housing Pricing Prediction

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Topic

- We've chosen to analyze and construct a predictive model for housing prices in Houston, TX (MFU/SFU), as well as determining and describing the relationship between the final price and its various input factors.

Questions to Answer

- Where is the best location to buy a house?

- Which factors lead to higher property values?

- Which factors lead to lower property values?

- Which Super Neighborhood has the highest property values?

- Which Super Neighborhood has the lowest property values?

Tools

- PostgresSQL
- Pandas
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Data

- Super Neighborhood Median Household Income
- Super Neighborhood Population
- Square Footage
- Number of Bedrooms
- Single Family vs Multi-Family
- Zillow Walk Score
- Zillow Transit Score
- Zillow Bike Score
- Property Price

Data Sources

- Data regarding Super Neighborhoods will come from the Houston, TX 2015 Census data, and the follow on demographic descriptions of each Super Neighborhood as provided by Houston's city website (https://www.houstontx.gov/planning/Demographics/docs_pdfs/SN/Median-Household-Income.pdf).
- The remainder of the data will be gathered from Zillow's database of for-sale homes in Houston, TX as retrieved from the Zillow data/research page (https://www.zillow.com/research/data/).
- The placing of these properties into their respective super neighborhoods will be accomplished through a pipeline which utilizes GIS representations of Super Neighborhood boundaries from the 2010 census, which upon checking, is still relevant and accurate to their contemporary states (https://koordinates.com/layer/12942-houston-texas-census-by-super-neighborhood-2010/)

Machine Learning Model

Results