Austin Housing Study

For Premier Properties, LLC By Jen Wadkins

Business Questions

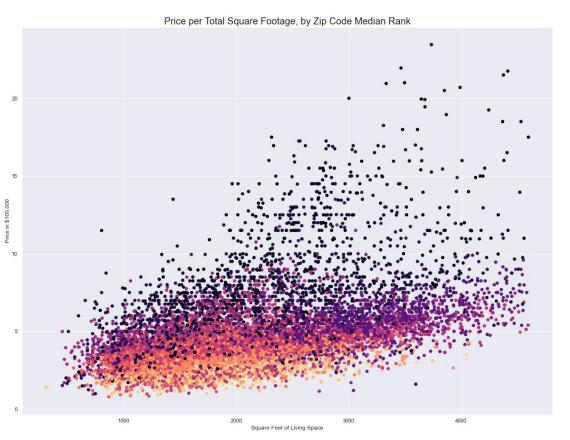
- What are the primary factors influencing housing prices in the Austin metro area?
- What home elements from the listing descriptions are important to the price?
- Do housing images contribute to model power?
- Can we effectively use a model-based system for realtors to determine a proper list price?
- What additional features would strengthen our model?

Factor: Square Footage

House prices rise in a near-linear fashion with square footage for the bottom ~75% of zip codes.

The darkest zip code medians exhibit a strong breakaway in price as square footage rises

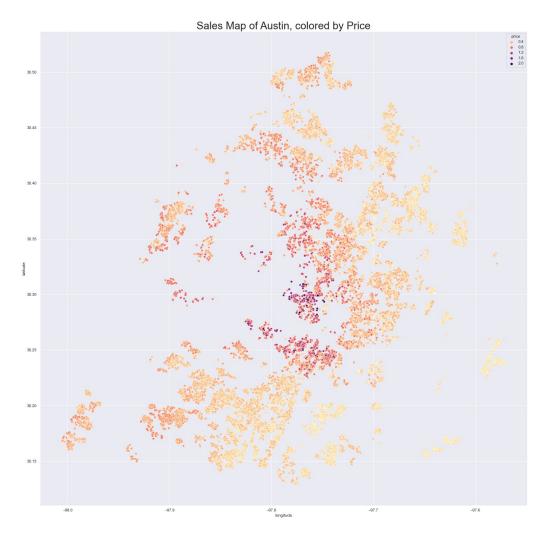
The lighter yellow, orange, red and even purple ranks are relatively linear.



Factor: Location

Location is everything.

Prices reduce as the location moves further from the city center into the suburbs



Other factors

- Number of bathrooms
- School rating
- Lot size
- Descriptive elements/features
- Images

Listing Description Elements

Finding the descriptors that we should highlight in the listing.

Home Features - Pool, marble, hardwood, tankless

Location elements - Barton, Zilker, Congress, airport

Descriptive elements - View, luxury, outdoor, gourmet

Use important descriptors in the listings, when they are accurate.

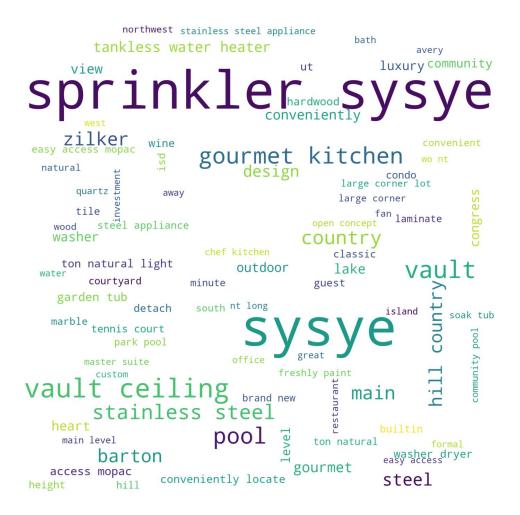
Don't mistake importances for causality



Explaining Photos

Photos are important, but hard to explain how or why.

Use our descriptive word importances to inform our photographs



56.4K Error

To model or not to model?

56.4k Mean Average Error in either direction

How to Improve the Feature Set?

- Home condition
- Home build quality
- Neighborhood quality
- Google satellite imagery of property

Thank You