

An aerial photograph of Seattle, Washington, taken at dusk. The city's skyline is visible, with numerous skyscrapers and buildings illuminated by their internal lights. The city is situated on a peninsula, with the water of the Puget Sound to the left and the city extending into the surrounding land to the right. The sky is a mix of deep blue and orange hues from the setting sun. A large white text box is overlaid on the left side of the image, containing the title and subtitle. A smaller white text box is located in the bottom left corner.

Housing Analysis

PROJECT FOR KING COUNTY, WA RESIDENTS

Sierra Stanton, March 2021

SUMMARY

Overview of Project

We have been charged with analyzing the housing industry as we compile valuable intel for homeowners considering whether home improvement projects will add value to the sale value of their homes. We'll use four data sets from the King County Department of Assessments to help our client forecast the potential monetary effects of particular home improvement projects in their county.

OUTLINE

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KING COUNTY BUSINESS PROBLEM

Our client in King County, WA wants to advise homeowners on home improvement projects that will add to the sale value of their homes but needs to understand the relationships between these projects and the potential monetary effects.

DATA ANALYZED

- **Parcel Records** - shows us details regarding each unit of land that has been created by a partitioning of land
- **Residential Building Records** - shows us a breakdown of attributes pertaining to building records
- **Real Property Sale Records** - details land, everything that is permanently attached to the land, and all of the rights of ownership
- **Look Up** - shows us serves as a dictionary, providing two sets of identifying numbers that equate to real-world information about land.

METHODOLOGY

We extracted and cleaned residential building records in order to build increasingly effective linear regression models that infer the relationships between elements of homes and their associated prices. We also compared which elements had the most dramatic effect on said prices in order to help our client properly advise home owners.

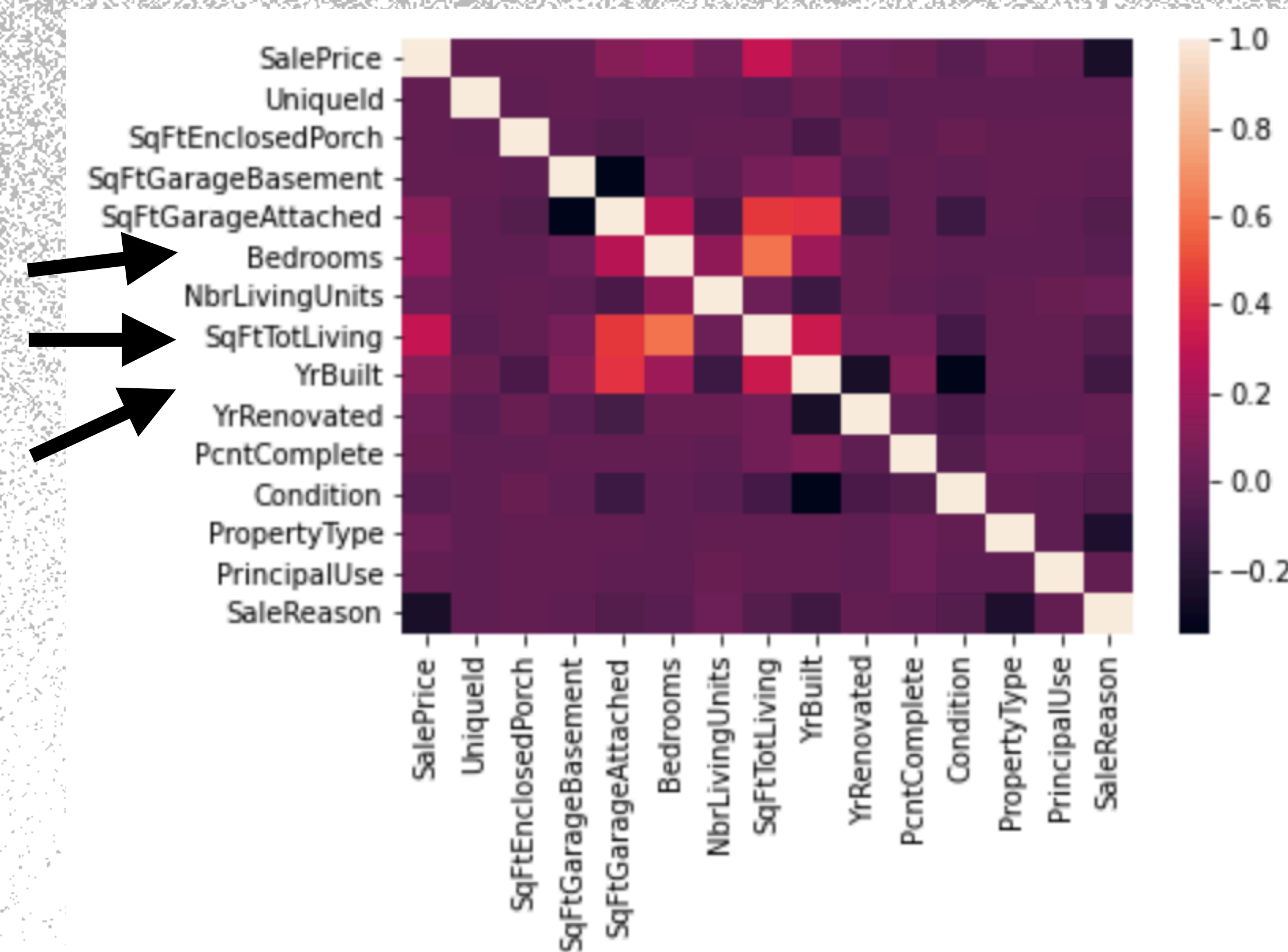
RESULTS

When going through our results, it's important to note that the relationships between variables will become increasingly clear with additional time and model fitting.

RESULTS

Residential building records show particular home features are most proven to affect the resulting sales price of a home.

Correlations between Housing Attributes and Sales Price



CONCLUSIONS

- THE TOTAL SQUARE FOOTAGE OF A HOME IS PROVEN TO HAVE THE LARGEST BEARING ON THE HOMES RESULTING SALES PRICE
- THE DISTRICT OF EACH RESIDENTIAL HOME SHOWS TO BE INSTRUMENTAL IN DETERMINING THE RANGE OF SALES PRICE FOR A HOME, TO THE EXTENT THAT HOME PROJECTS COULD COST MUCH MORE THAN THE POTENTIAL SALES PRICE BUMP
- ENCLOSED PORCHES ARE MUCH LESS POPULAR THAN OPEN PORCHES AND ARE NOT RECOMMENDED FOR MONETARY GAIN

FUTURE WORK

- IF WE BUILD AN ADVISORY BOARD OF PROFESSIONALS OPERATING IN KING COUNTY AND TRANSLATE OUR DATA INTO RELEVANT QUESTIONS, WE CAN TAKE THEIR DIRECTION AND CONTINUE FINE TUNING OUR MODELS FOR INCREASING ACCURACY
- SEEKING THE MOST UPDATED DATA AND ISOLATING ADDITIONAL OUTLIERS WILL HELP US ESTABLISH MORE CONCRETE FINDINGS

THANK YOU!

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