

Project 2: Ames Housing Data

Joe Serigano - DSIR 523
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Ames, IA Realty



Our goal:

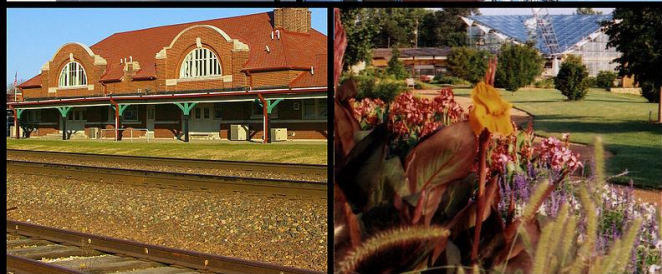
- Help our clients get their homes ready to sell and, since we're the best in town, figure out how to get them the *best price*.

Our data:

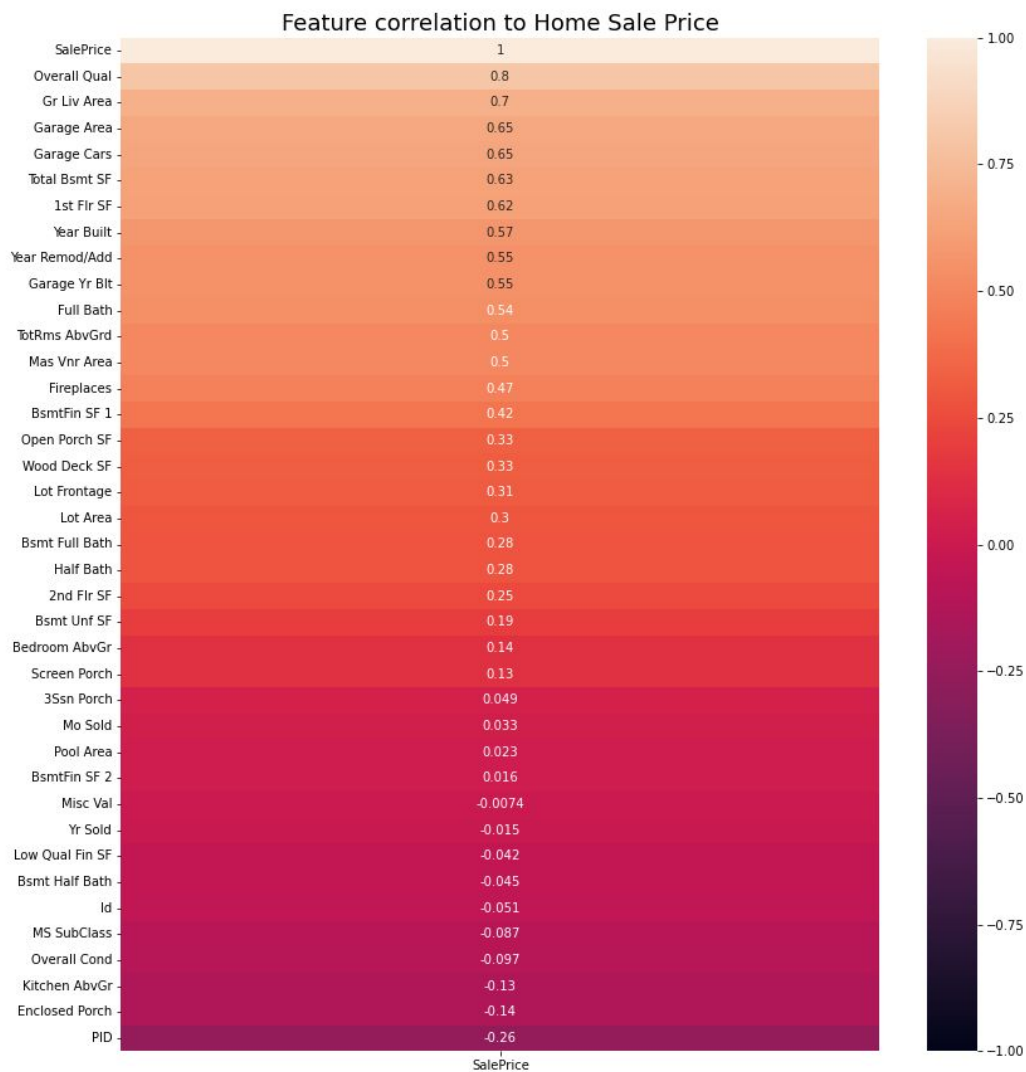
- Ames, IA housing data from the Ames Assessor's Office used in computing assessed values for individual residential properties sold in Ames, IA from 2006 to 2010.

Our problem statement:

- What characteristics of a home are most likely to increase the sale price?
- What improvements can our clients make to increase their home sale price before putting their home on the market?

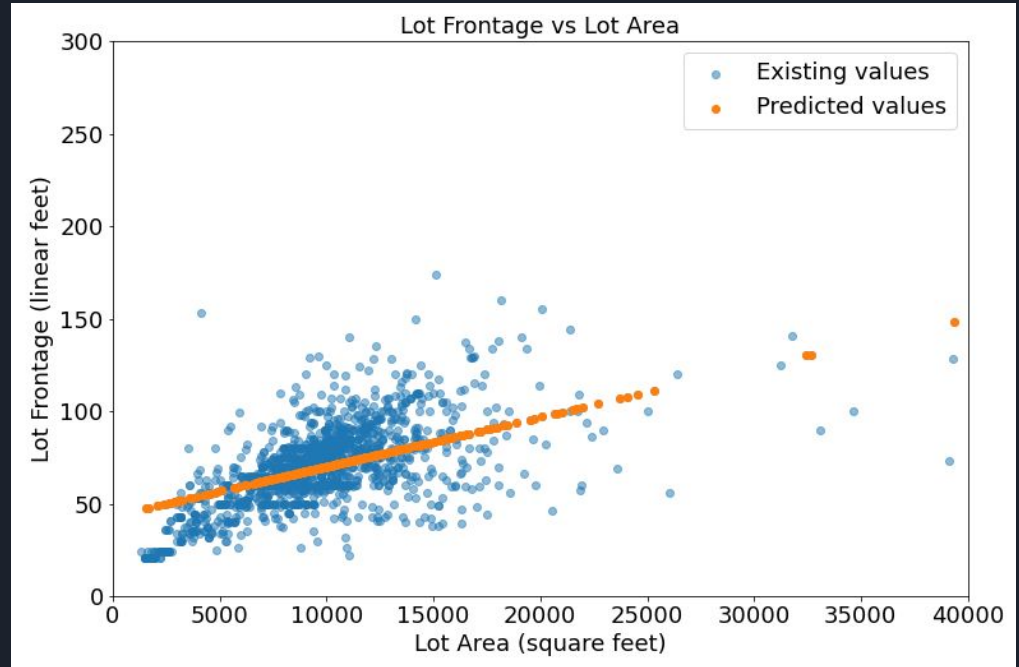


- Brief overview of the data:
 - Overall home quality and features related to home size show the strongest correlation to home sale price.



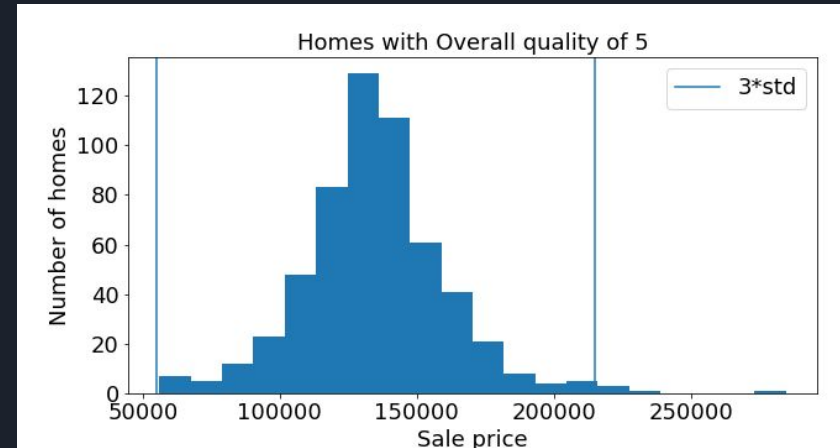
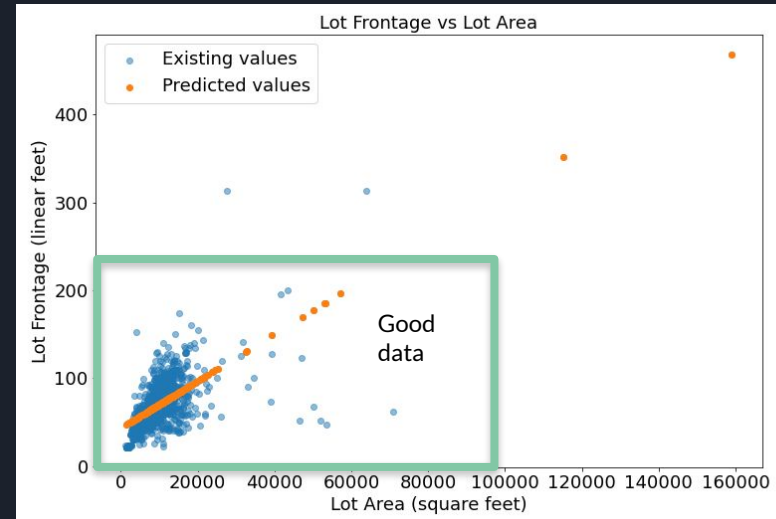
Data cleaning: Null values

- Most null values in the data set were filled with zeros.
- For missing Lot frontage values, a simple linear regression model was created to impute values.



Data cleaning: Outliers

- Obvious outliers were removed from this dataset.
- Outliers from each overall quality ranking value were also removed.

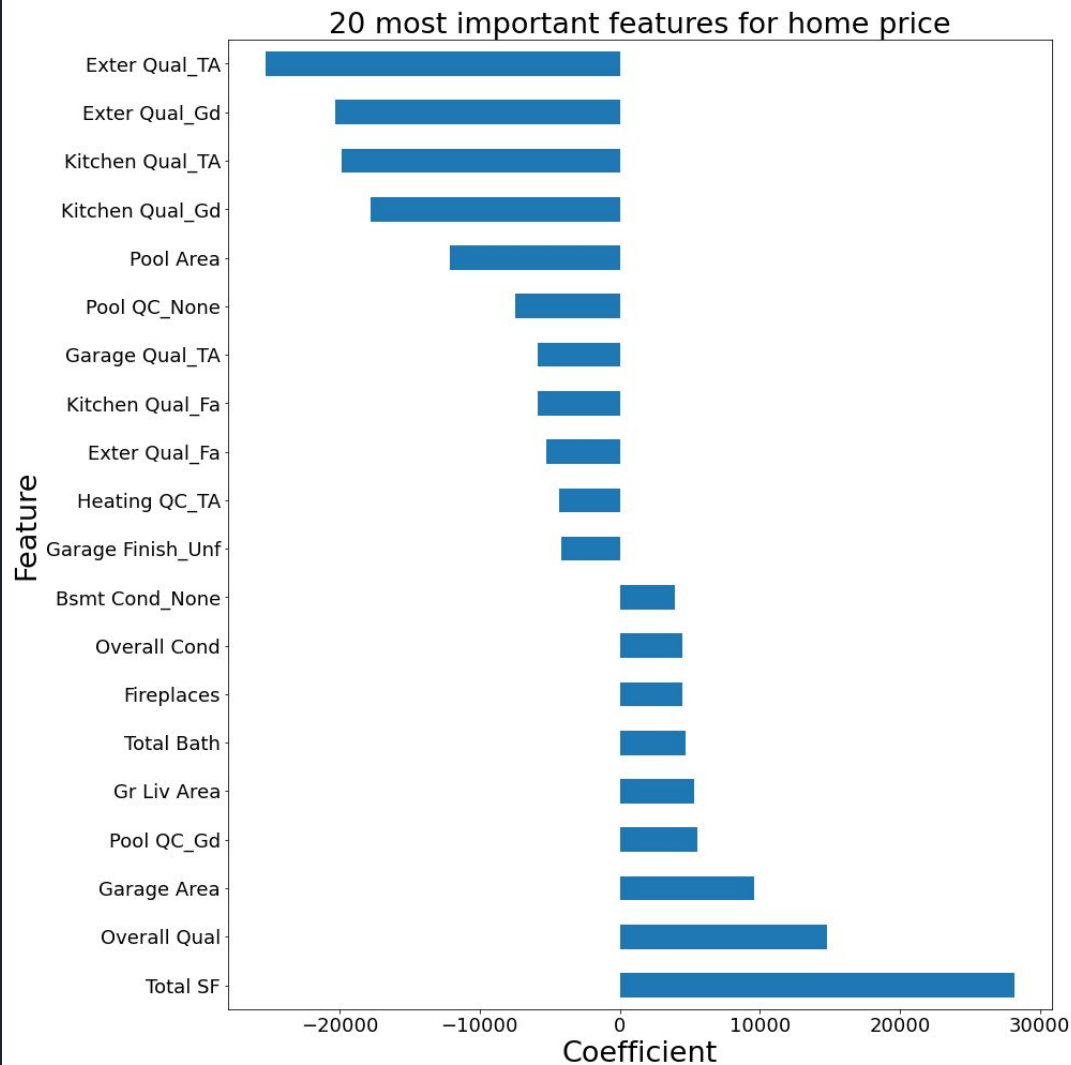


- **Feature selection:**

- We only consider variables that are capable of being changed by the homeowner.

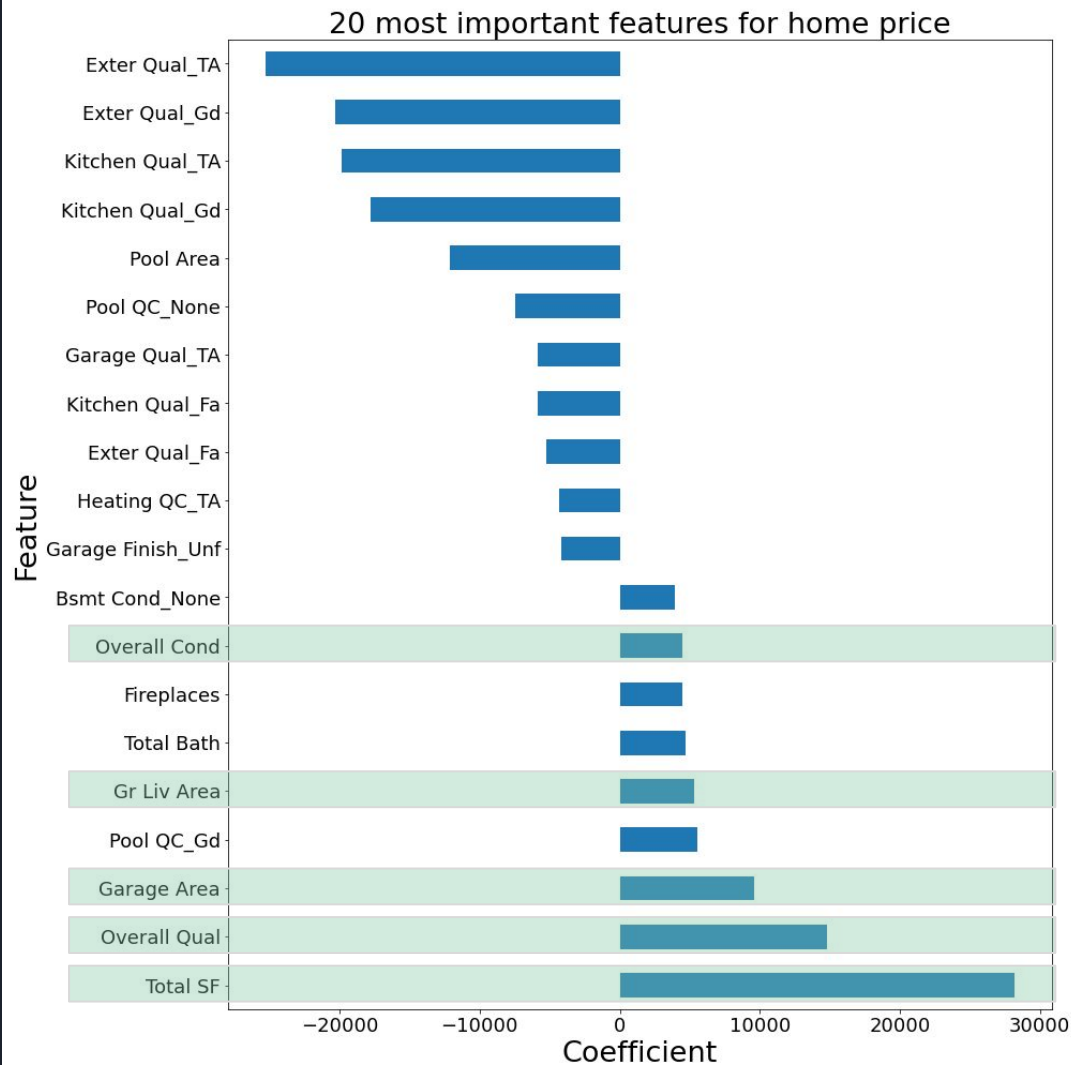
- **Modeling:**

- We use a Lasso linear regression model, which adds a penalty term to variables and is capable of removing values it deems insignificant.



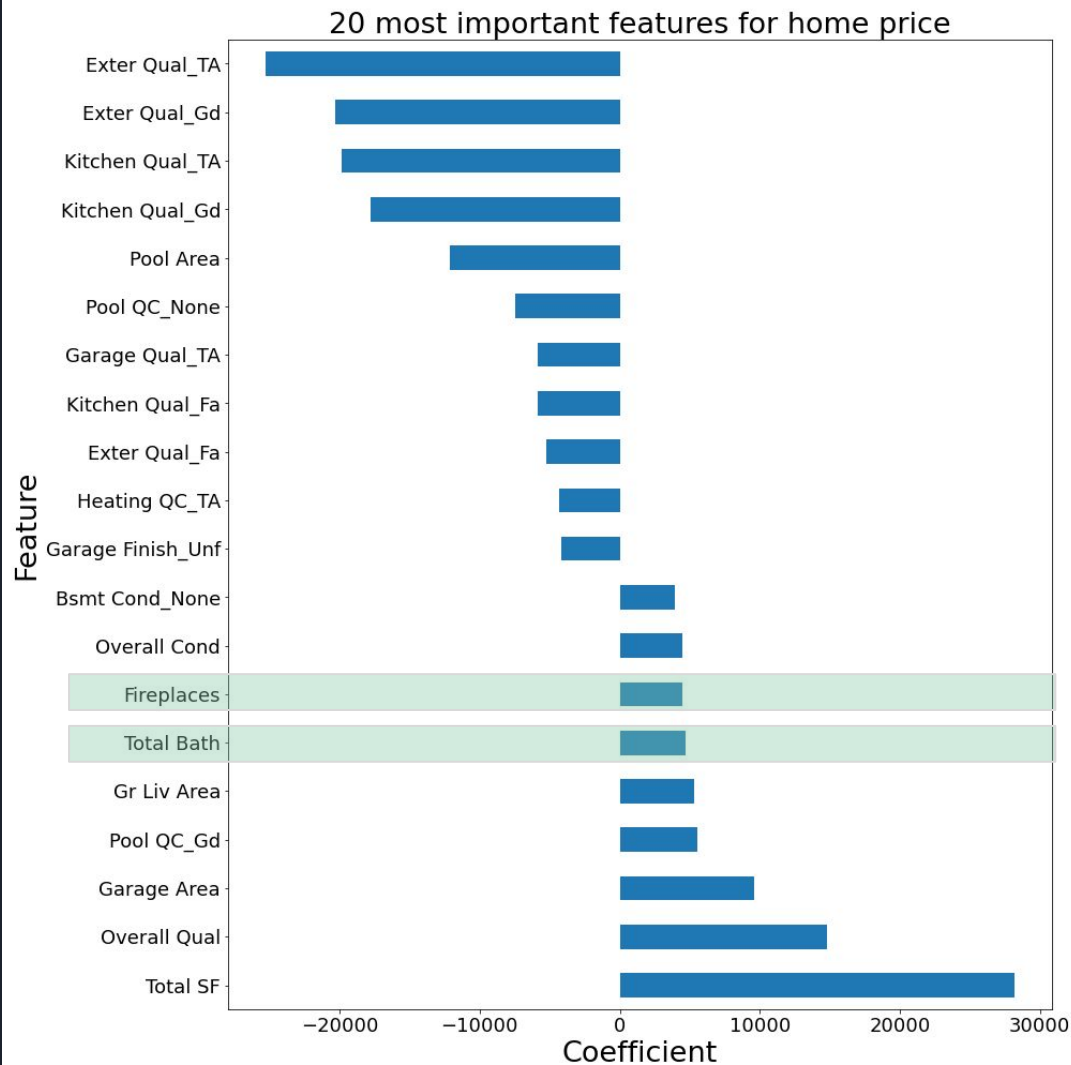
Key recommendations:

- Increase total square footage and quality of your home, especially through ground level living space or garage expansion.



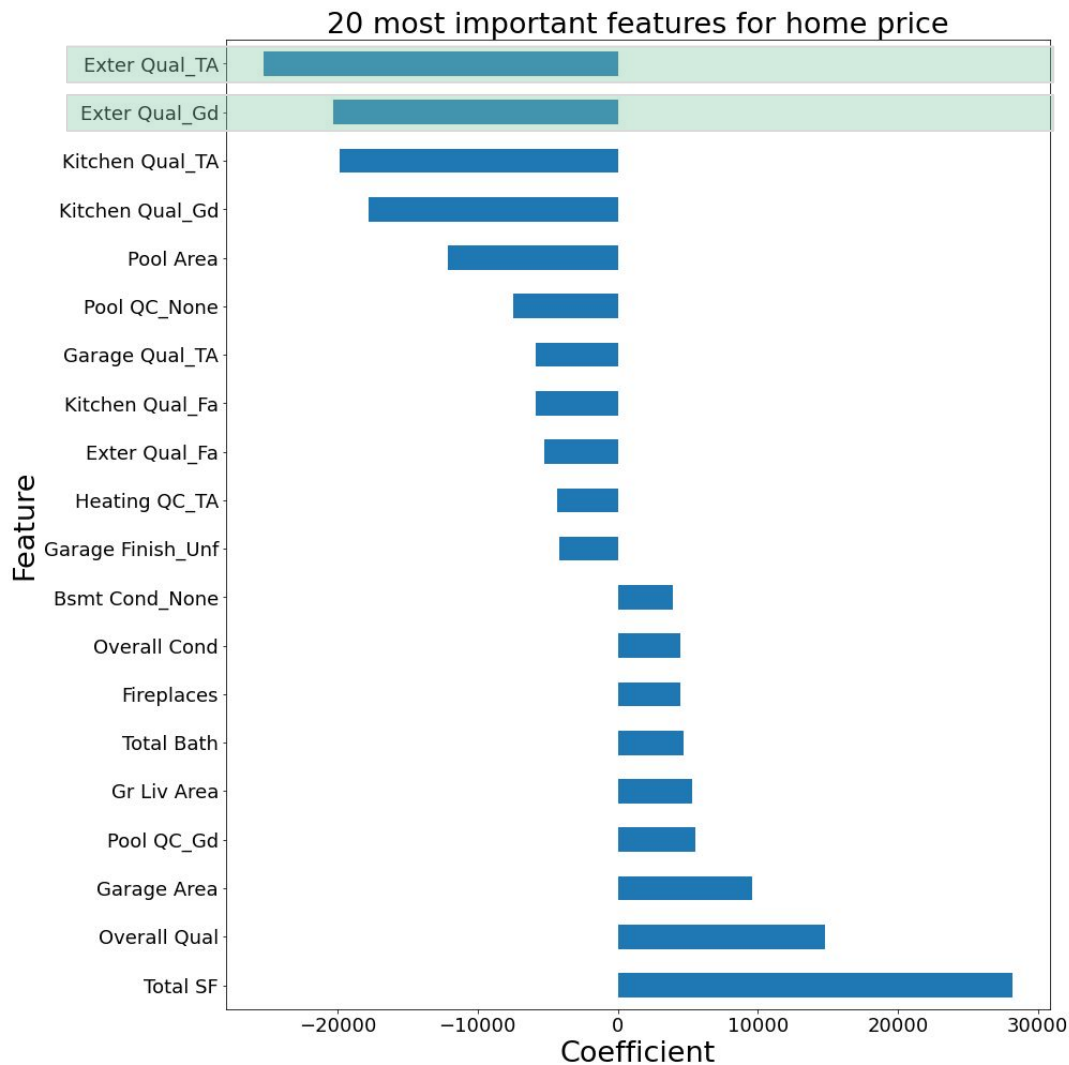
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- Increase total square footage and quality of your home, especially through ground level living space or garage expansion.
- Add more bathrooms or fireplaces to your home.
- Increase the quality of your home's exterior.
- Increase the quality of your home's kitchen.

