

# Ames Housing Data: Market Price Investigation



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# About Us



- Leading real estate and rental marketplace
- Dedicated to empowering consumers with data, inspiration and knowledge
- Zillow serves the full lifecycle of owning and living in a home

## **Zestimate Home Valuation Model**

- Incorporates public and user-submitted data
- Accounts for home details, location and market conditions
- Aims to be the no.1 property website for estimates

# Problem Statement



Ideally our users would upload their property details and get an accurate estimation instantly from all locations.

In reality, our algorithms are currently inaccurate for the City Ames. Users have have been complaining the estimations very greatly from the appraisers official estimates.

If we are unable to implement a more accurate model then our users will move to our competitors sites.

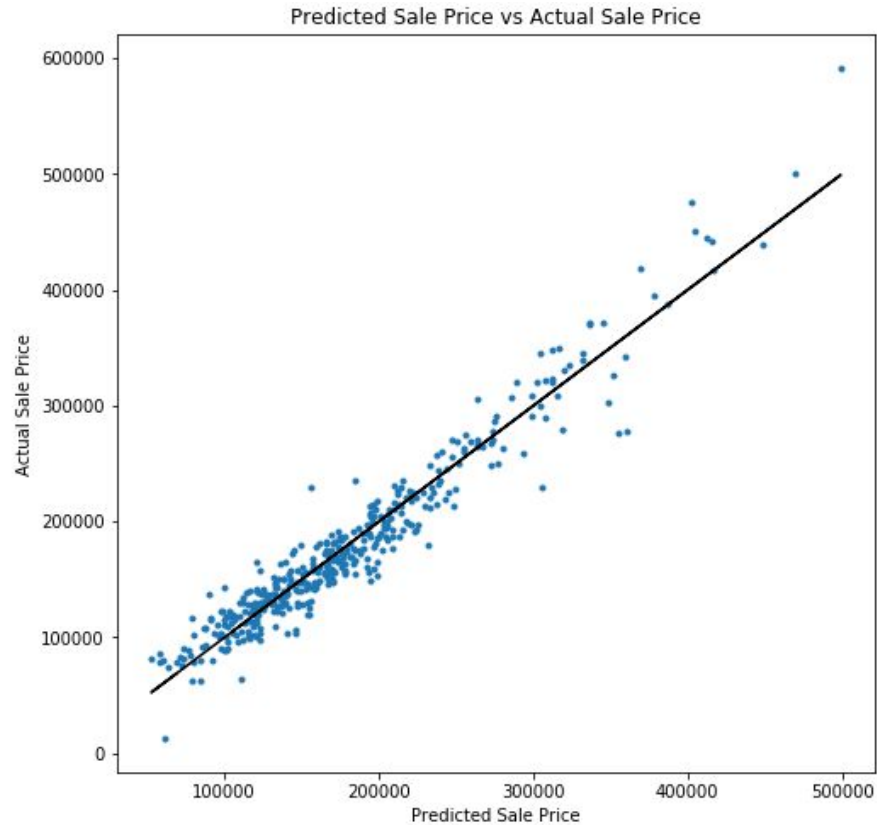
We aim to create a model which is able to reflect the property prices accurately in this location. This will provide the Zestimates team with key insights to help improve their algorithm.

# Data and Methodology



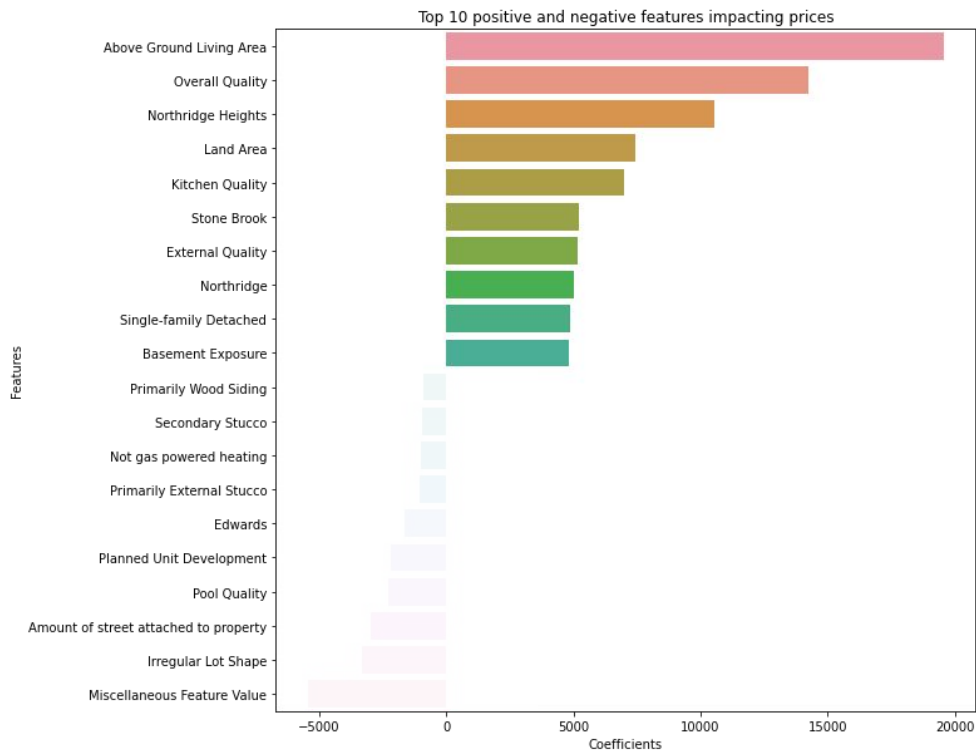
1. What Data is used?
2. Data cleaning and explore key correlations
3. Model creation
4. Investigate and find key drivers

# Model Accuracy





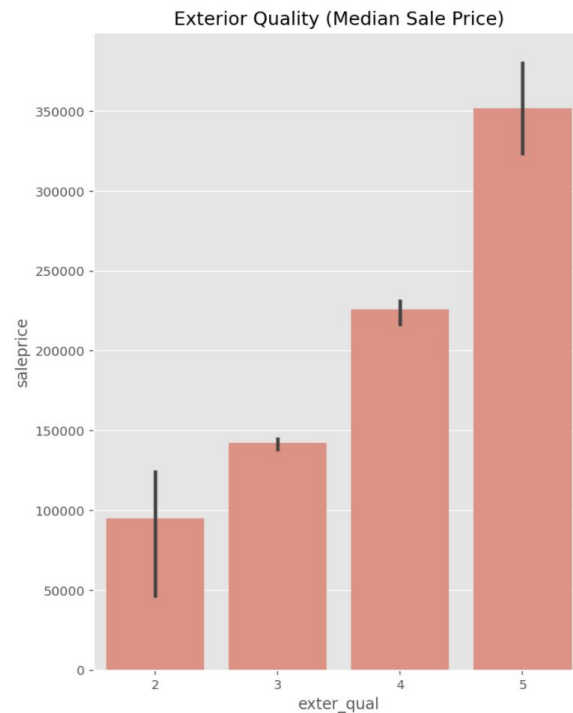
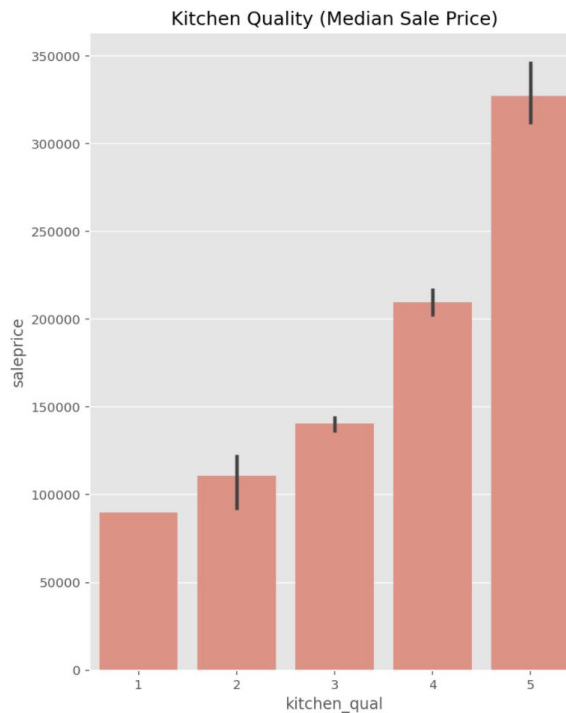
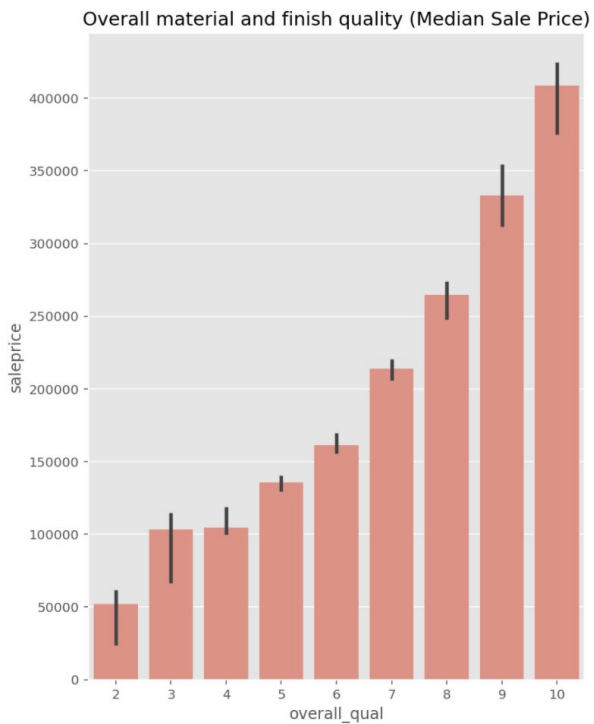
# Which features appear to add the most value to a home?



# 1. Ground Living Area

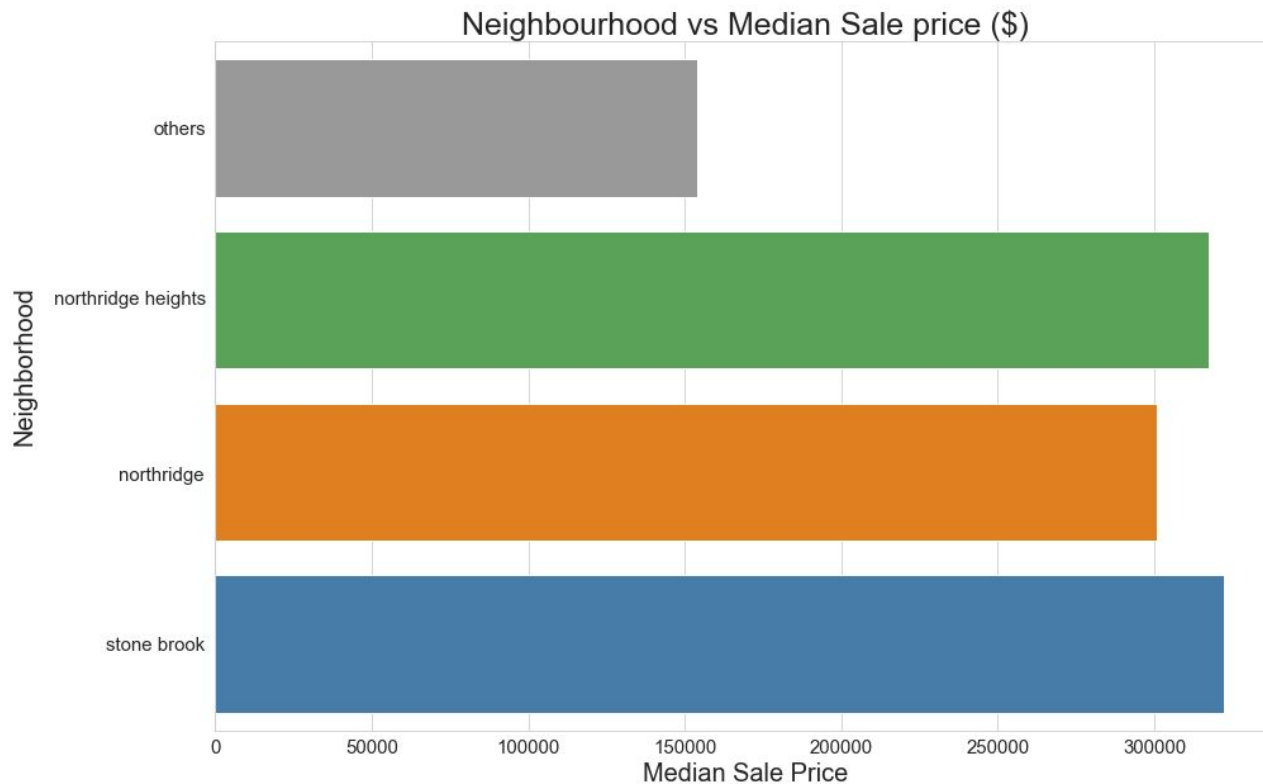


# 2. Quality

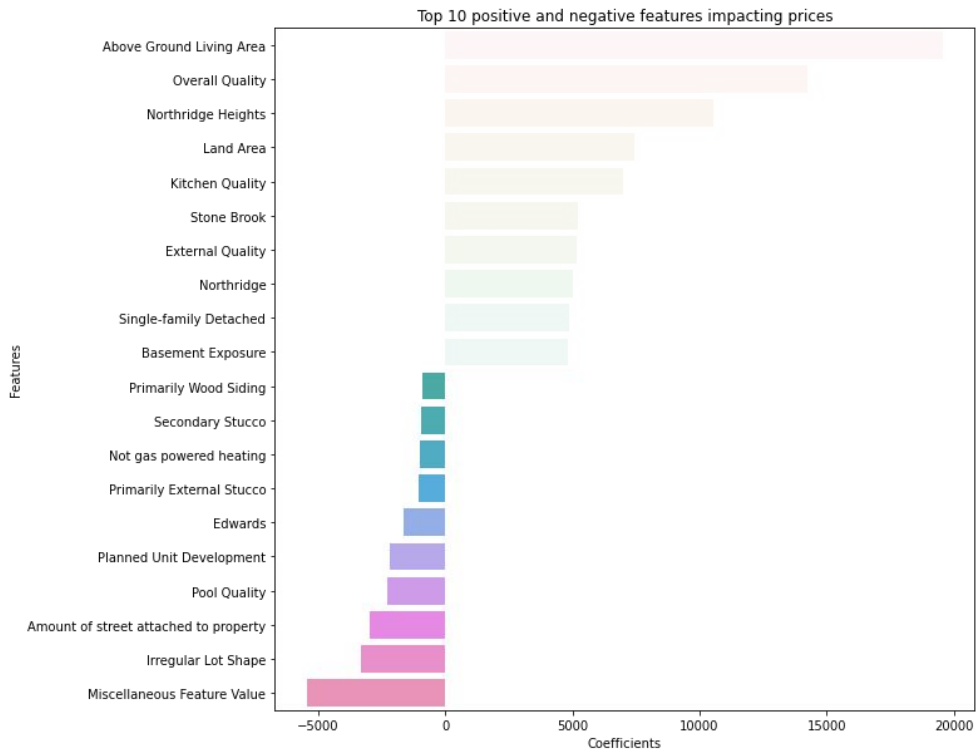




### 3. Neighbourhoods



# Which features appear to hurt the value to a home?



# Conclusion



- We have created a highly accurate model to predict the house prices in the city of Ames for Zillow's Zestimate.
- Home values are affected by a property's ground living area, neighbourhoods and overall quality.
- As these the area and quality goes up, so will the house values.
- Low valued neighborhoods, poor aesthetic houses, unfinished areas and irregular properties will lower a house's value.

# Recommendations



- For zillow to update their insights and the recommended key factors and update the model accordingly.
- Improve on property data and accuracy by encouraging Zillow users to complete data fully.
- Advise users to focus on improving on the quality of their home and living areas to increase the house value.

# Final Thoughts



**Would this model generalize to other cities?**

## **More Data needed:**

- Demographics of neighbourhood
- Inflation, Bank interest rates
- More data in general ..



**Questions ?**