

King County Housing Analysis

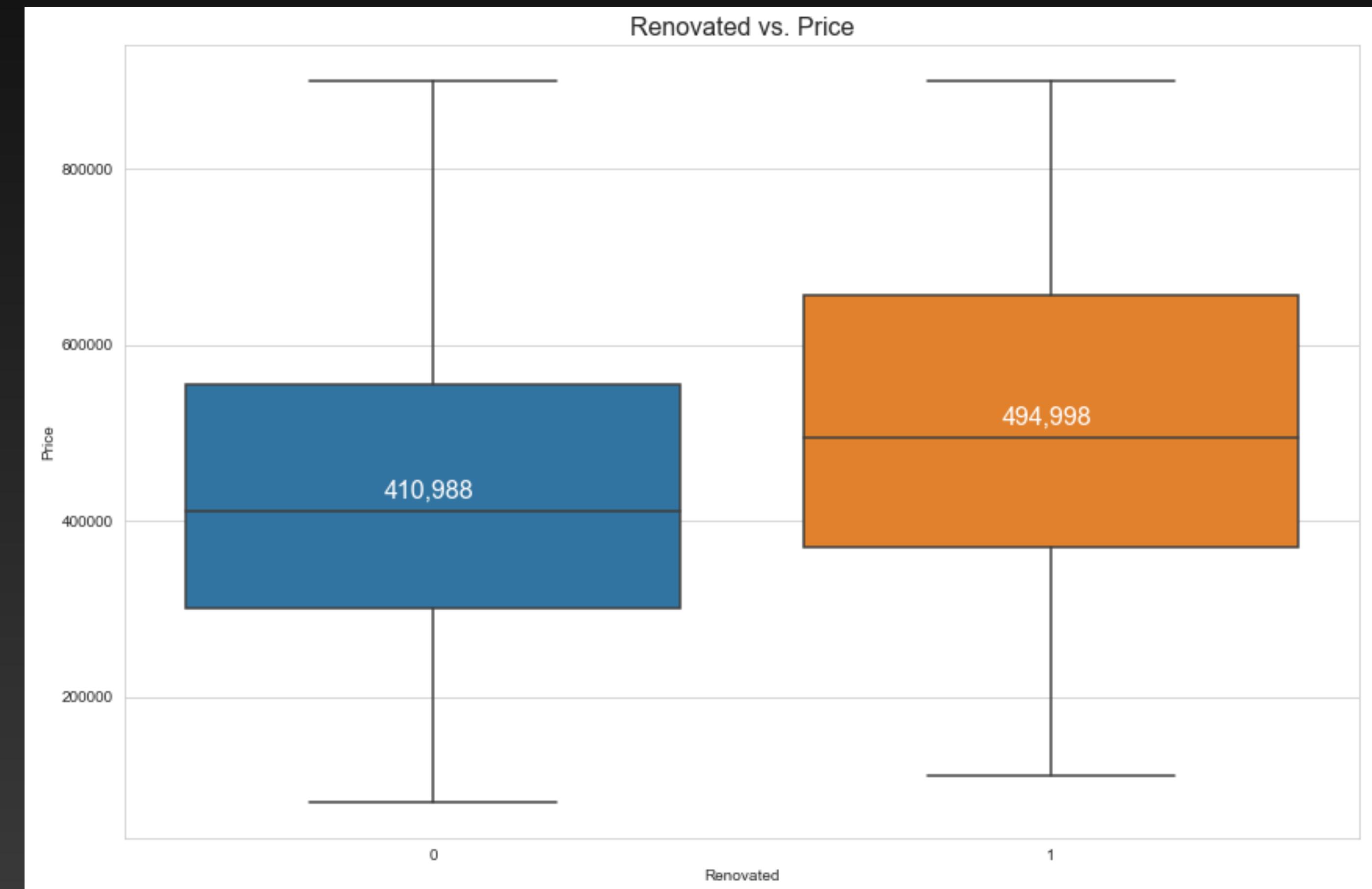
Presented By: David Bartholomew

Objectives

- Highlight some practical questions & recommendations pulled from the King County housing data set for potential home buyers & sellers.
- As a result of building a multiple linear regression model, explain some of the top features used to predict the sale price of homes.
- This analysis is ideal for those looking to buy or sell homes under 900k.

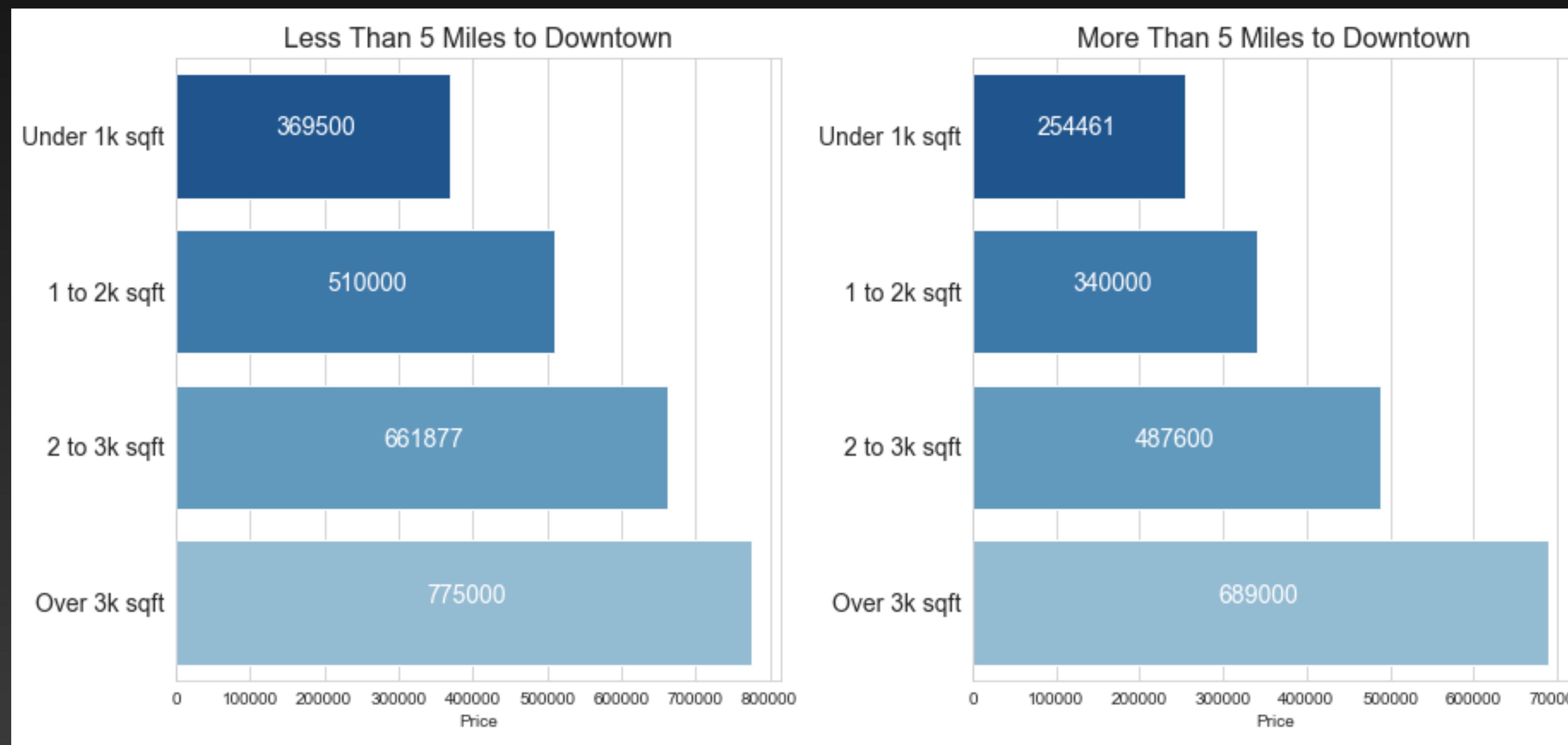
Question 1: How do renovations impact sale price?

- Difference in overall median between homes renovated and not renovated is over 84k.
- As a result of my regression model, sale price increased by \$43,401.87 for renovated homes.

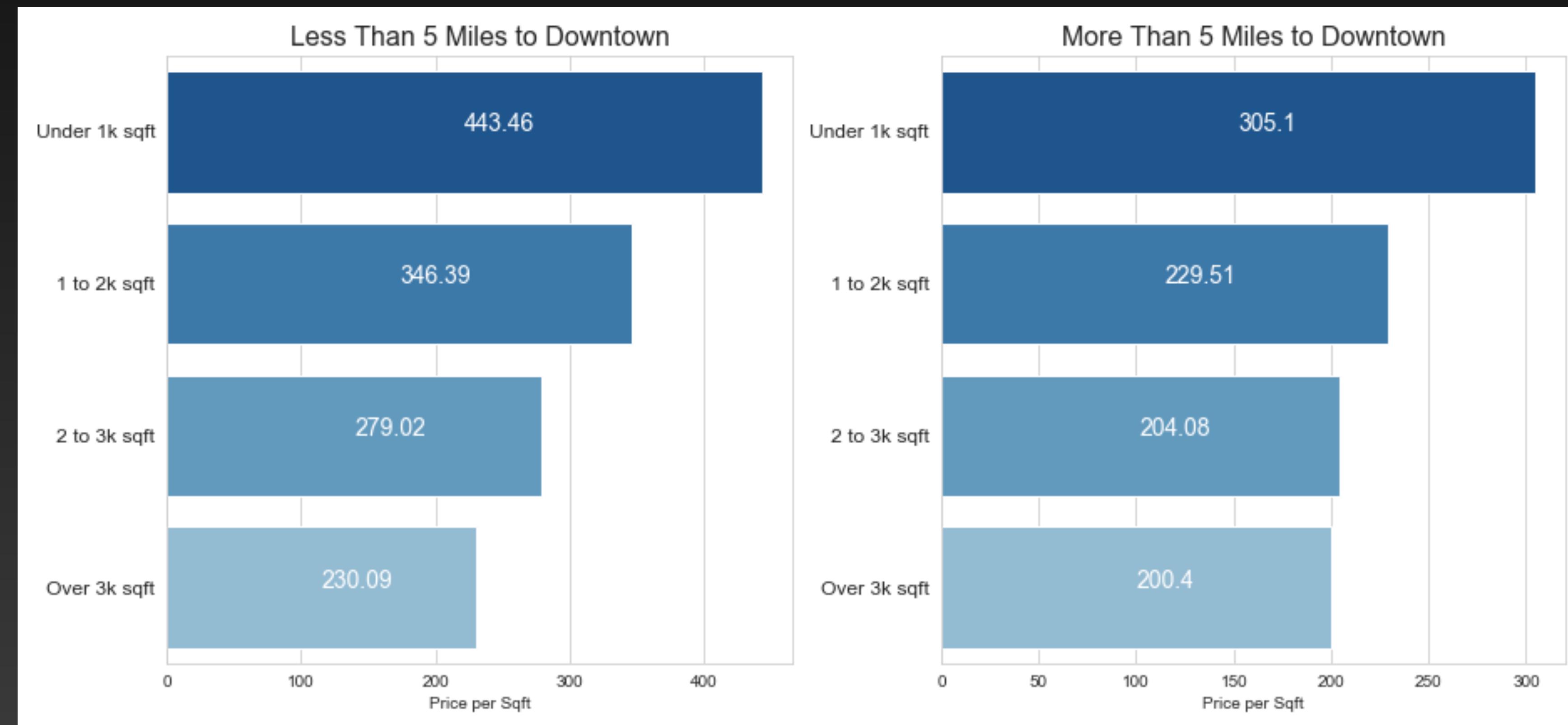


Question 2: How do prices compare based on distance from downtown and square footage?

- Naturally, downtown homes are significantly higher in every category of square footage, so location is important when buying a home.
- As square footage increases, price increases.
- In my regression model, every 100 sqft. Increase results in a price increase of \$7,649.

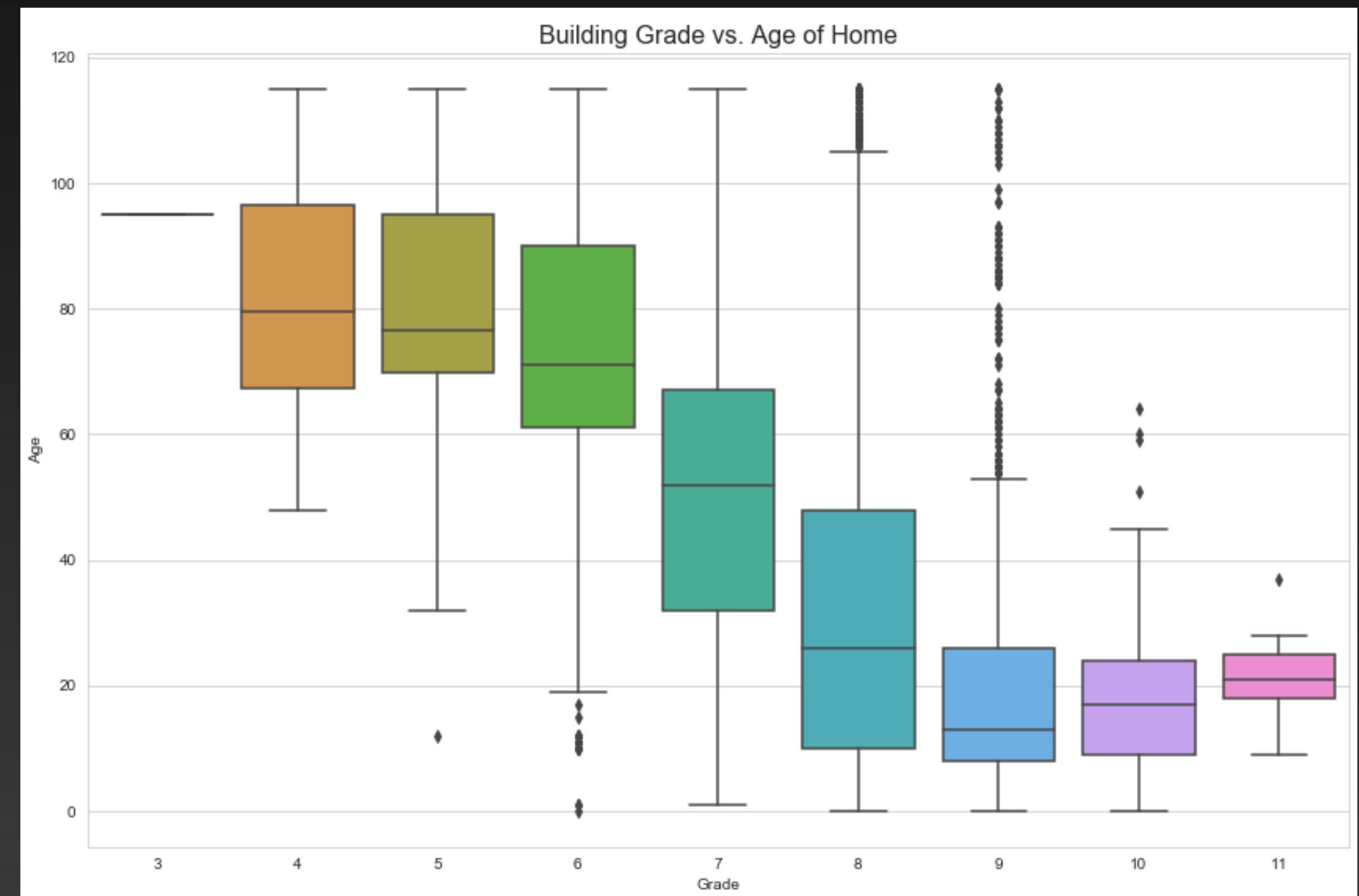


- Looking at the same breakdown by price per square feet, this clearly shows that smaller homes have a higher price per square foot.
- When selling a home, it's best to avoid comparing smaller homes to larger homes when comparing price per square feet alone.



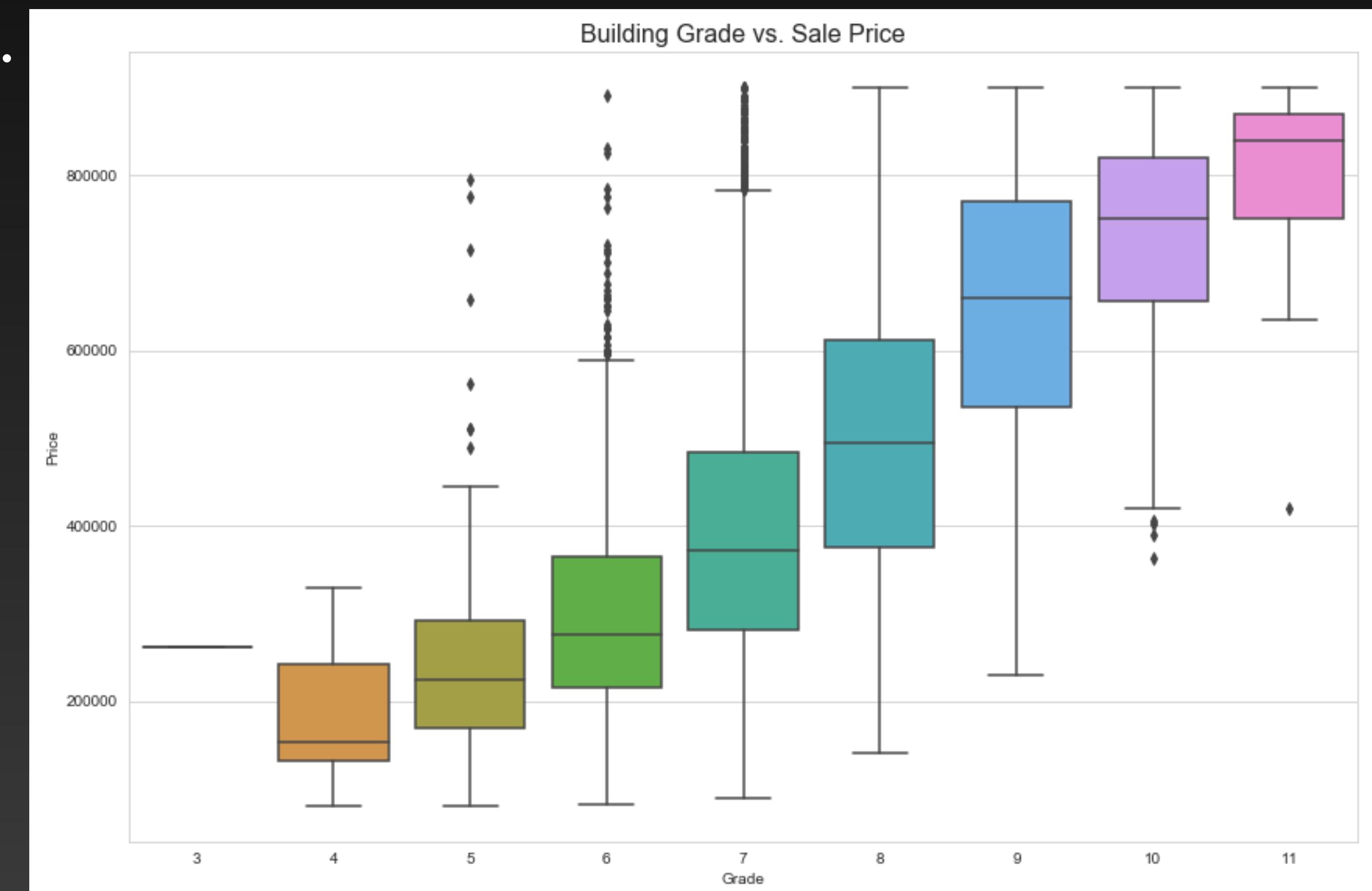
Question 3: How do building grade and age of the home relate?

- Building grade is a score from 1 to 13, with 1 falling short of minimum building standards and 13 being generally custom designed/built.
- Although not always the case, the newer the home the higher the grade.
- From grades 3 to 7, the median age is over 50.
- From grades 8 and up,
it's under 30



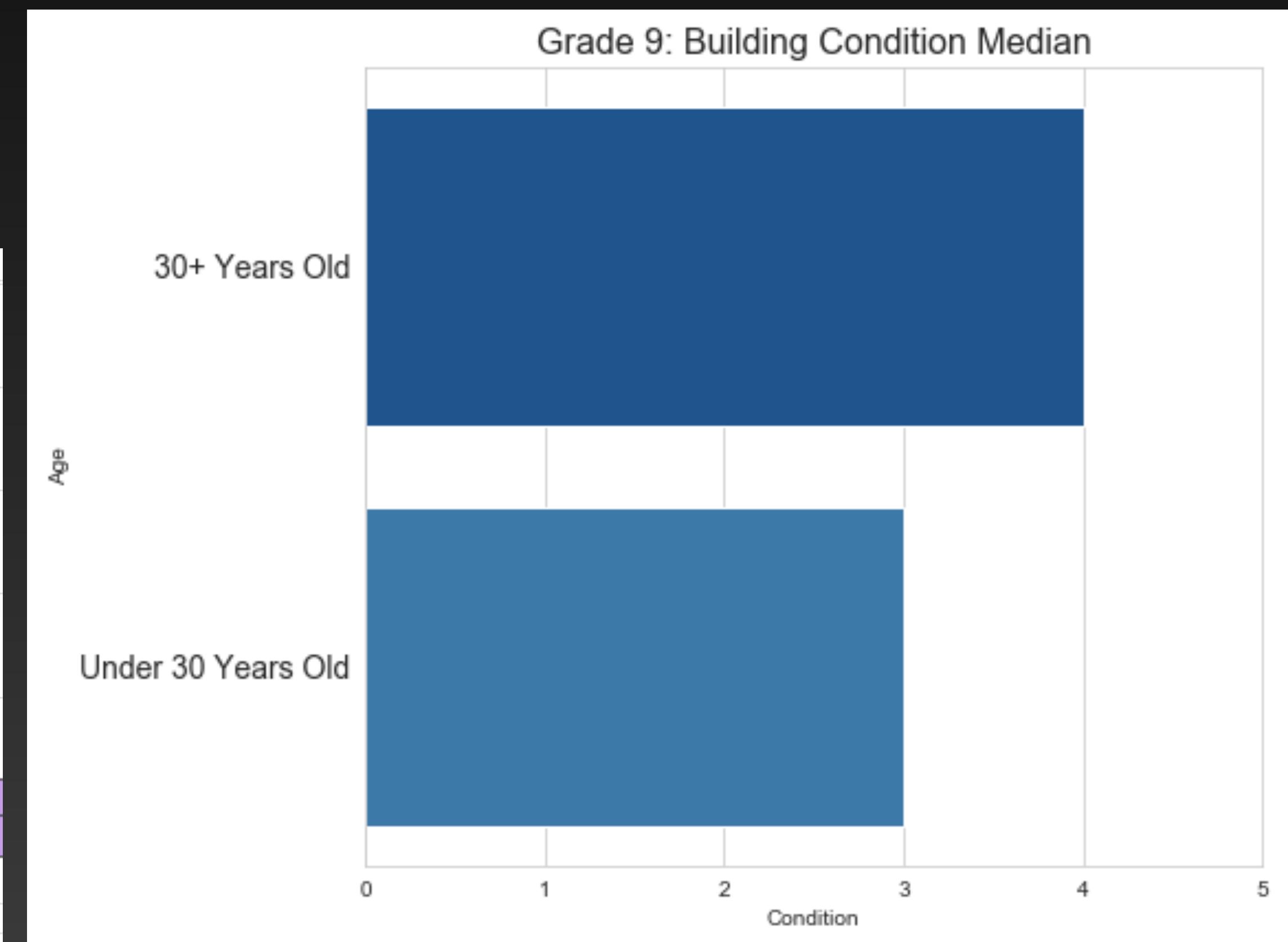
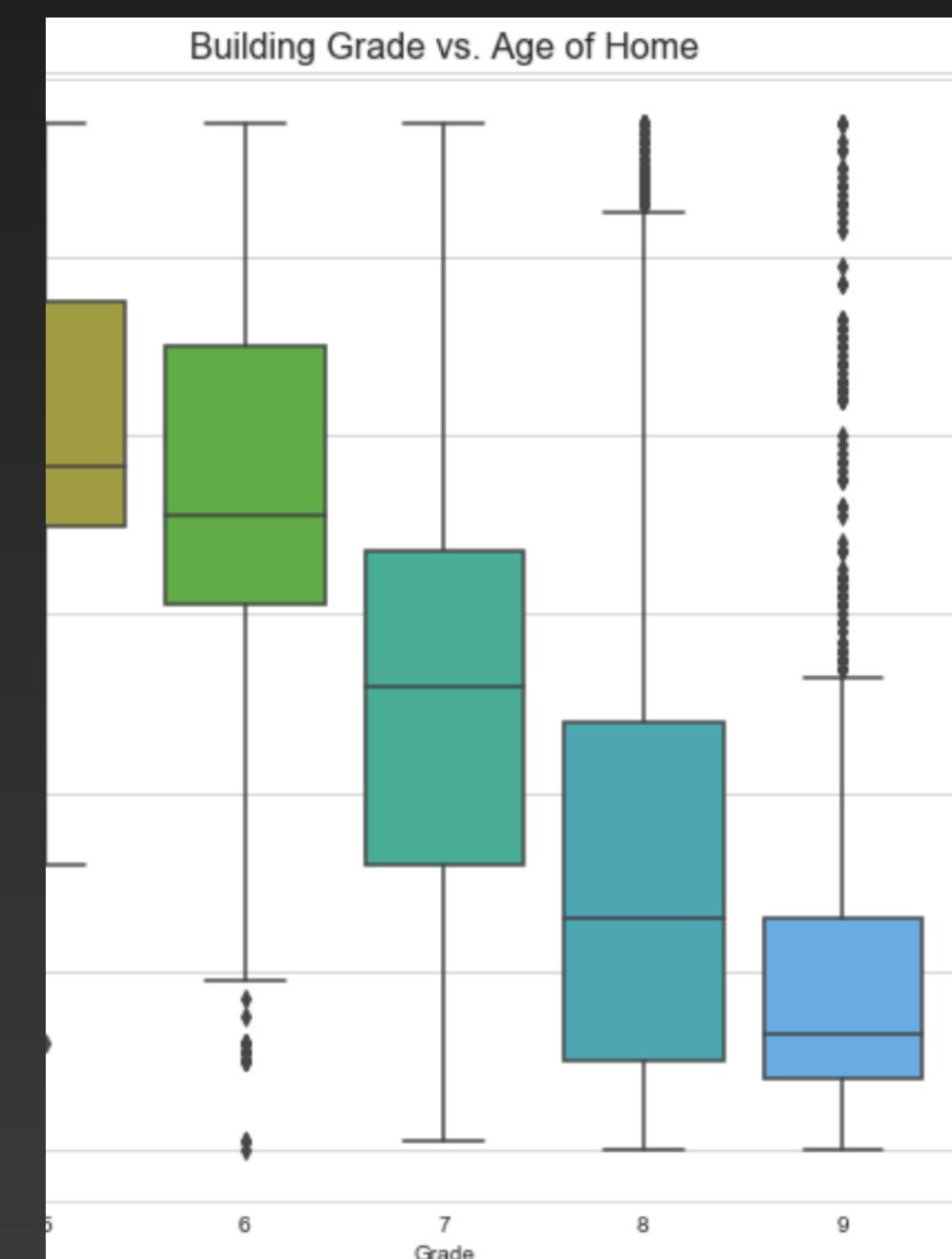
Question 4: How does building grade impact price?

- There is a clear increase in price as building grade increases.
- My regression model shows that an increase in building grade results in an increase of price by \$59,042.



Question 5: Why are there so many older homes in grade 9? Is there another factor?

- Building condition plays a role here. Homes over 30 years old in grade 9 have a median condition of 4, compared to newer homes with a condition of 3.
- According to the King County government website, a higher building condition lowers the effective age of the home. Upkeep and renovations add significant value for older homes.
- In my regression model, an increase in condition results in a \$21,942 increase in price



Conclusion/Further Analysis

- Multiple features impact the sale price of a home, and evaluating these features individually is not enough to predict prices.
- Ultimately, these questions build the case for the need for an accurate multiple linear regression model to help determine an appropriate price to buy or sell a home.

Thank you.