

Group C: NYCHouse

**Mapping the Pulse of New York Real Estate: An
Interactive Analysis of Housing Market Trends in NYC**

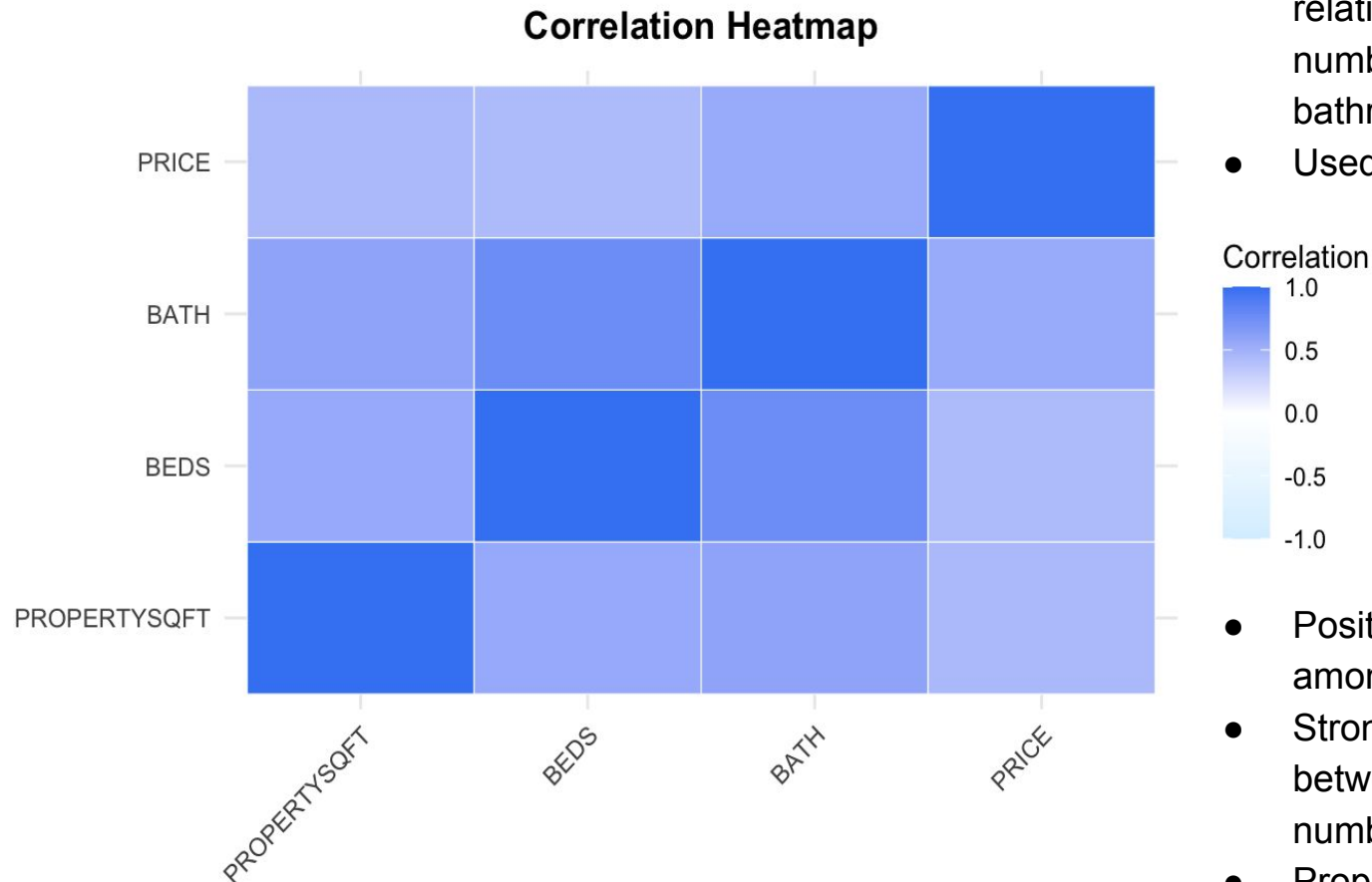
By Annika Xu, Cynthia Chen, Mengyan Xu

Introduction

Our group endeavors to demystify the intricacies of the New York City housing landscape, providing a thorough analysis that spans the diverse boroughs and neighborhoods of this vibrant metropolis. Utilizing a rich dataset, we aim to unravel the variegated tapestry of real estate prices, offering insights that cater to potential homebuyers, sellers, and market enthusiasts alike.



Topic 1: The relationship between size of the house, #of bedrooms, #of bathrooms and its price.

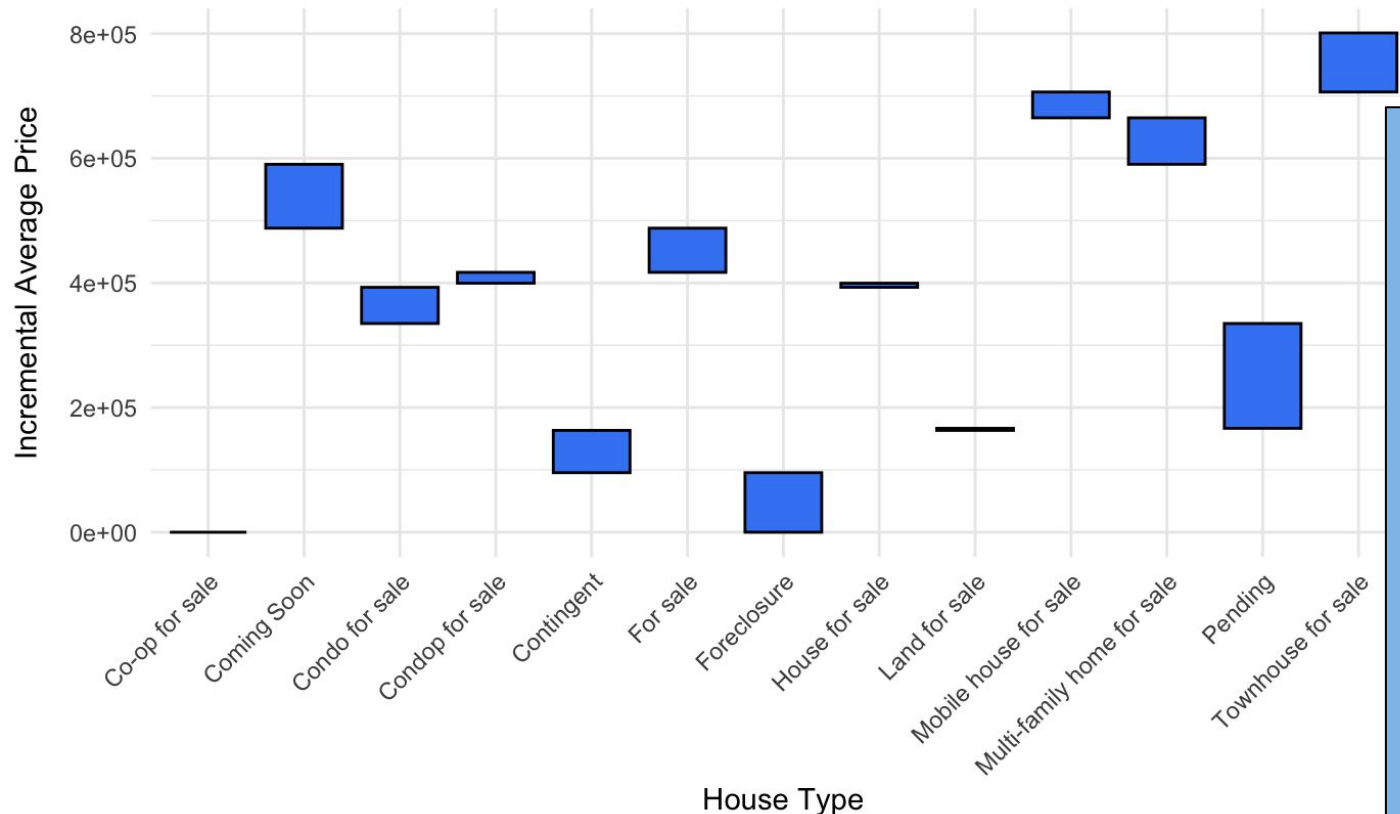


- We began our analysis focused on relationship between house size, number of bedrooms, number of bathrooms, and price.
- Used a heatmap for visualization.

- Positive correlation observed among all variables.
- Strongest correlation found between number of bathrooms and number of bedrooms.
- Properties with more bedrooms and bathrooms tend to have larger square footage and higher prices.

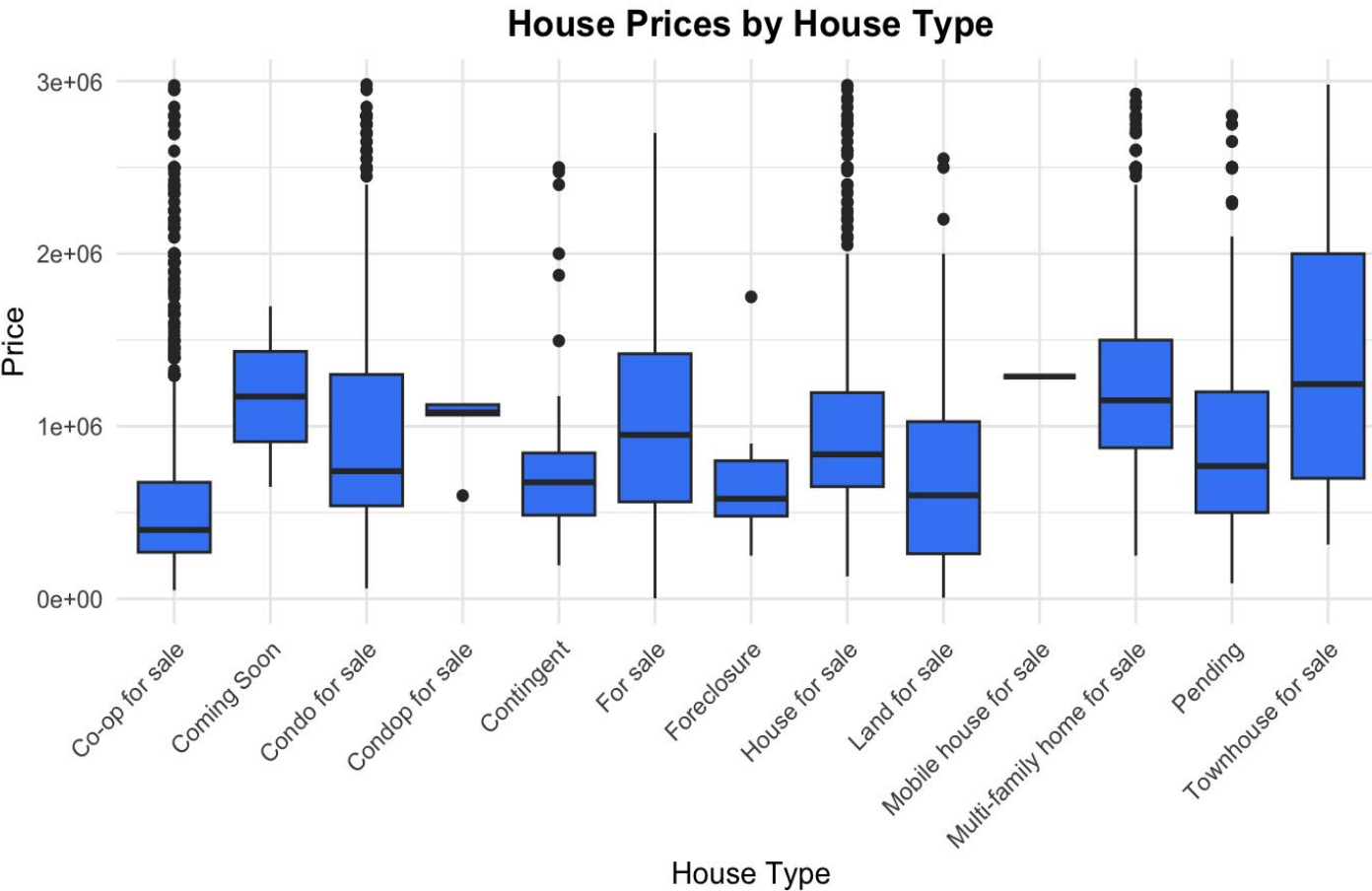
Topic 2: What are the incremental average price contributions for each house type?

Waterfall Chart of Average Price Contributions by House Type



- Each blue rectangle represents median incremental average prices for each house type.
- Y-axis measures prices in incremental averages; X-axis categorizes property types.
- Substantial variation observed in price contributions among categories.
- "Multi-family home for sale" and "Townhouse for sale" show high average price contributions.
- "Mobile house for sale" and "Land for sale" exhibit relatively low contributions.

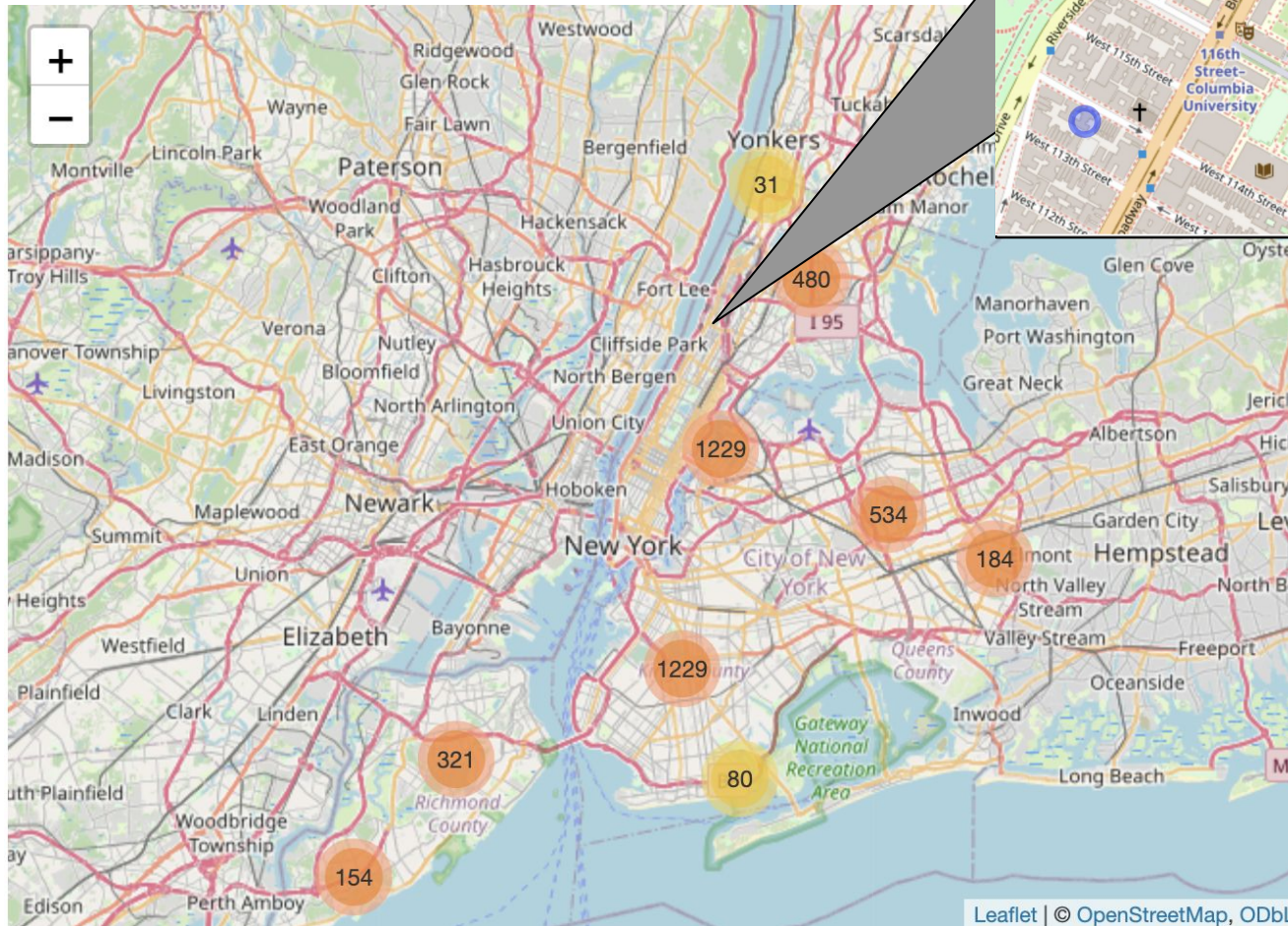
Topic 3: How do house prices vary by type? Which house type is most expensive/cheap?



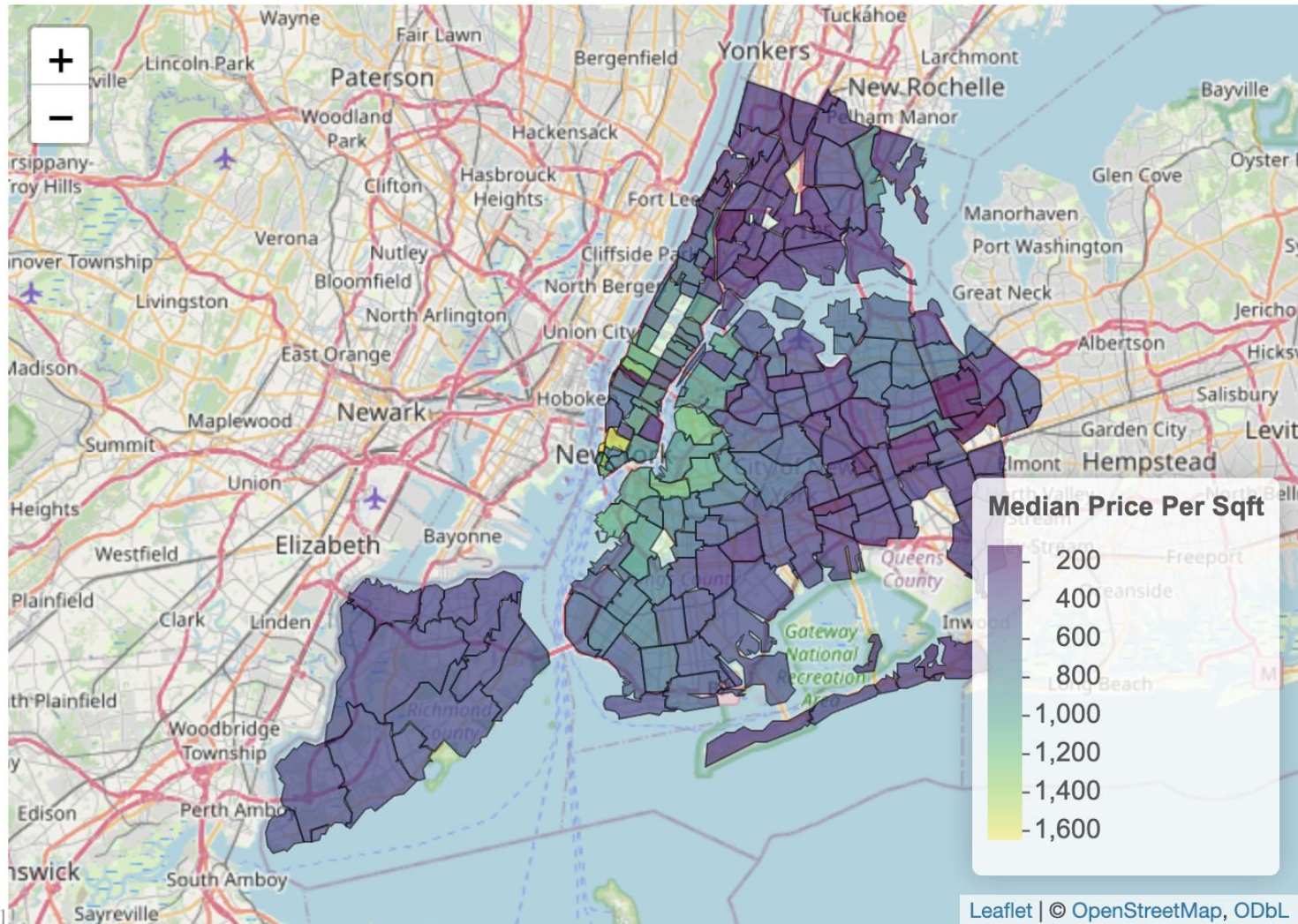
- "Townhouse for sale" observed as having highest selling price, while "co-op for sale" is the lowest.
- "Townhouse for sale" exhibits widest price range.
- "Contingent", "Foreclosure", and "Co-op for sale" have narrower price ranges.
- "Co-op for sale", "Condo for sale", "House for sale", and "Multi-family for sale" show higher number of outliers.

Topic 4: Mapping Residential Establishments Available

Agglomerate of Individual Residential Establishments With Pop-ups

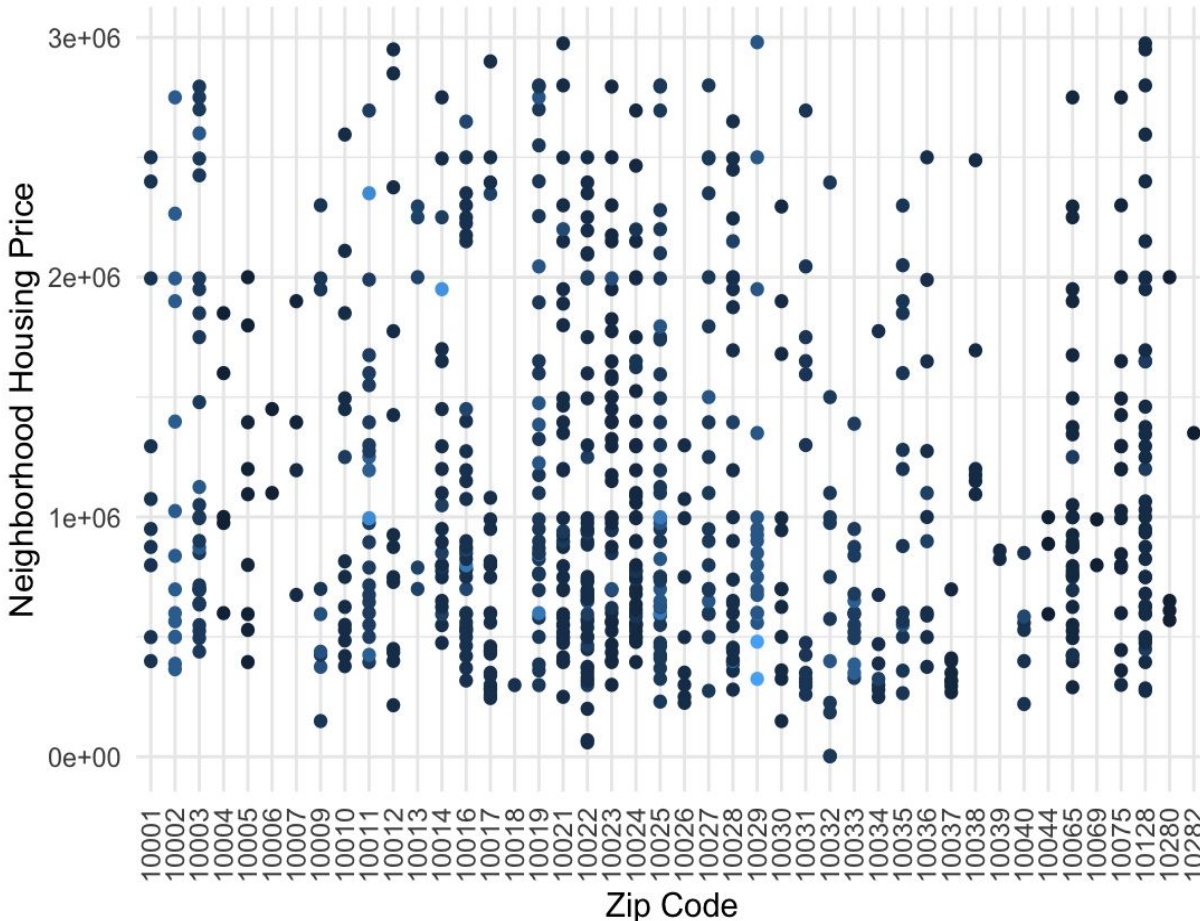


Medium Price Per Sqft by Zip Codes



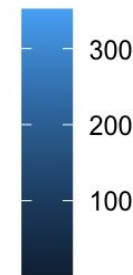
Topic 5: Will the presence of more retail store lead to higher housing price in the neighborhood?

Scatter Plot of Neighborhood Housing Price vs. Retail Store Count



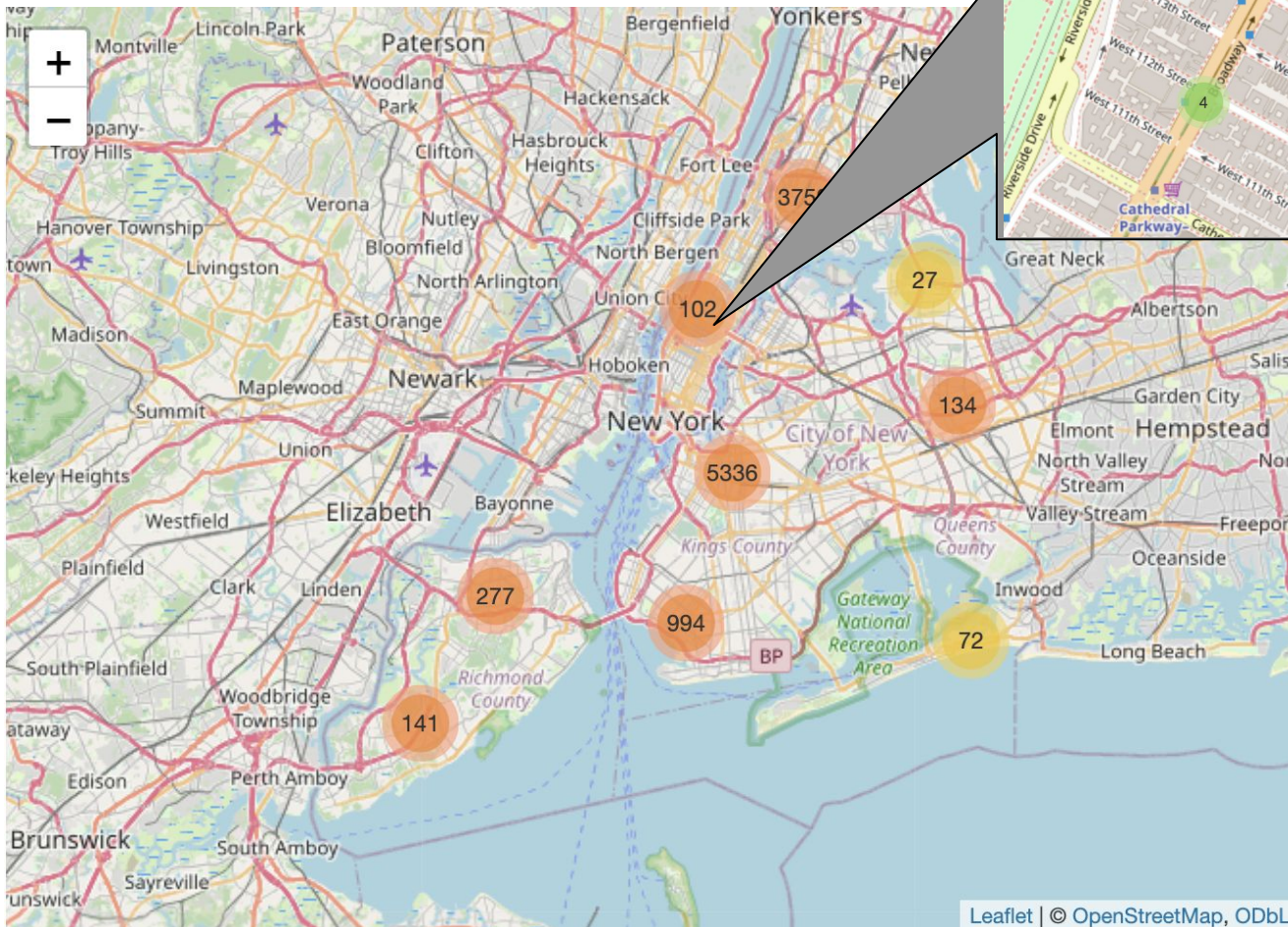
- We first hypothesized greater retail convenience might lead to higher housing prices.
- Utilized additional dataset focusing on New York City area.

Retail Store Count

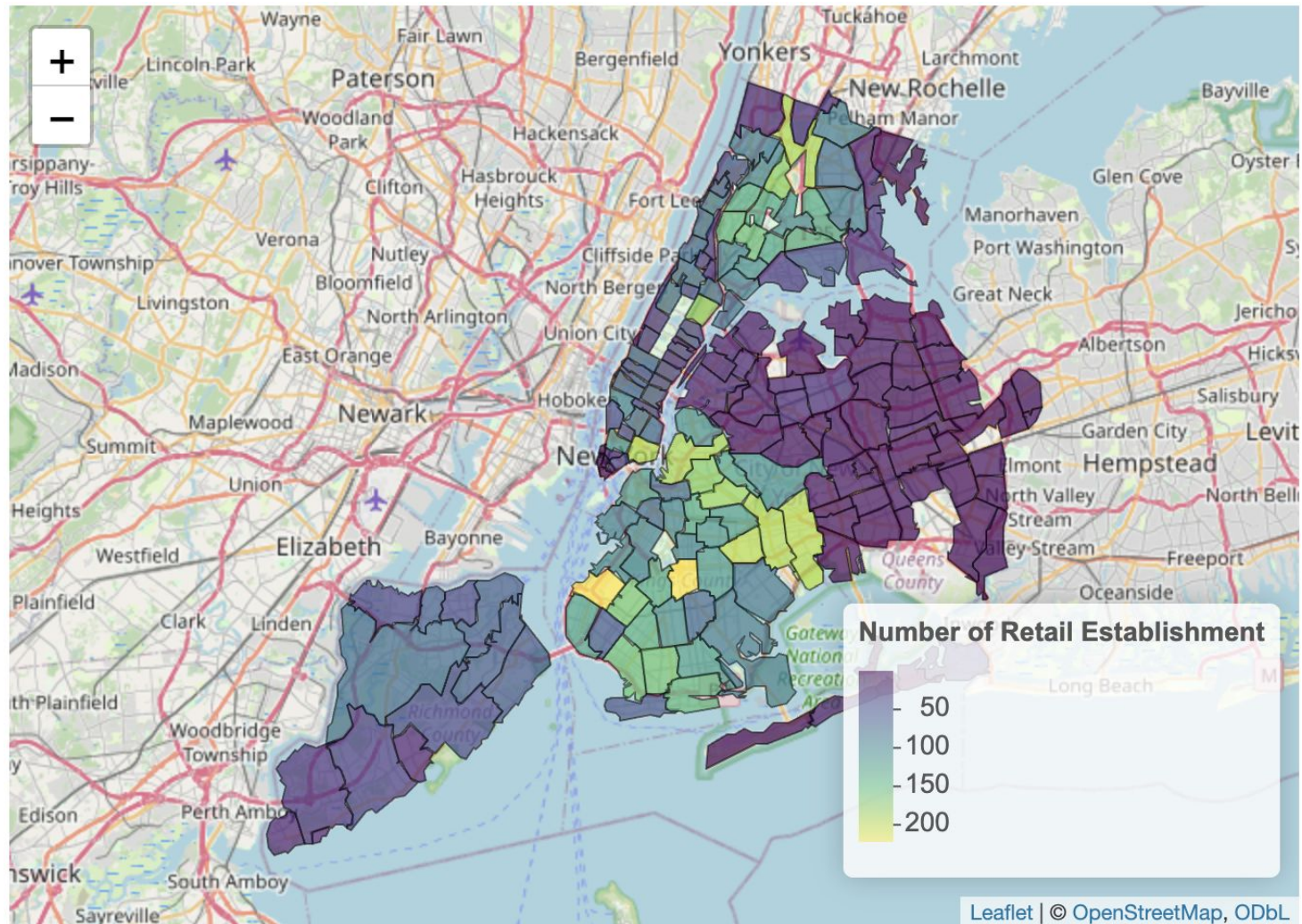


- Calculated average housing price and number of retail stores per neighborhood (zip code).
- No distinctly clear correlation found between variables overall.
- Certain zip code areas, such as 10023 and 10024, showed trend where fewer retail food stores correlated with lower neighborhood prices.

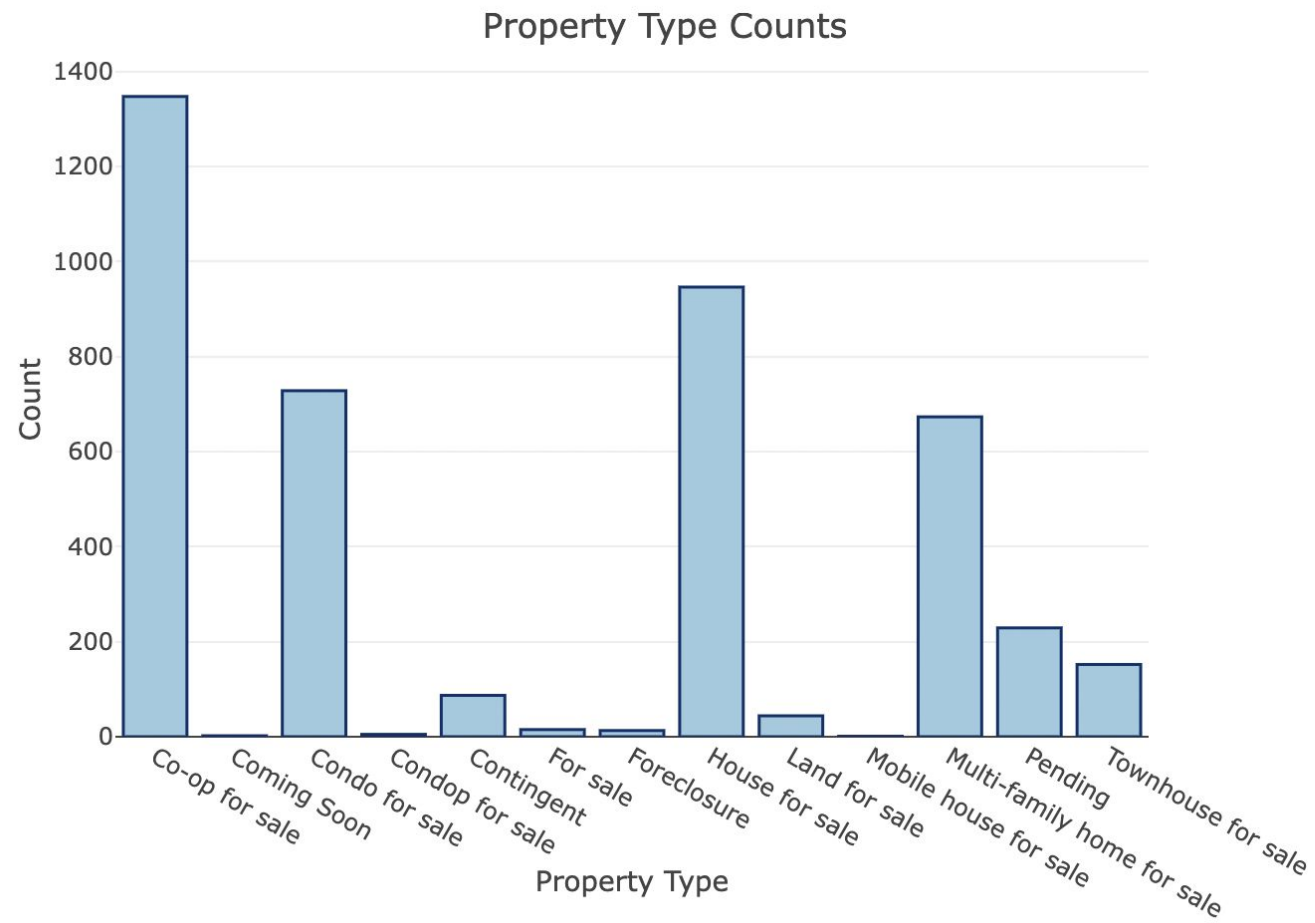
Agglomerate of Individual Retail Establishments With Pop-ups



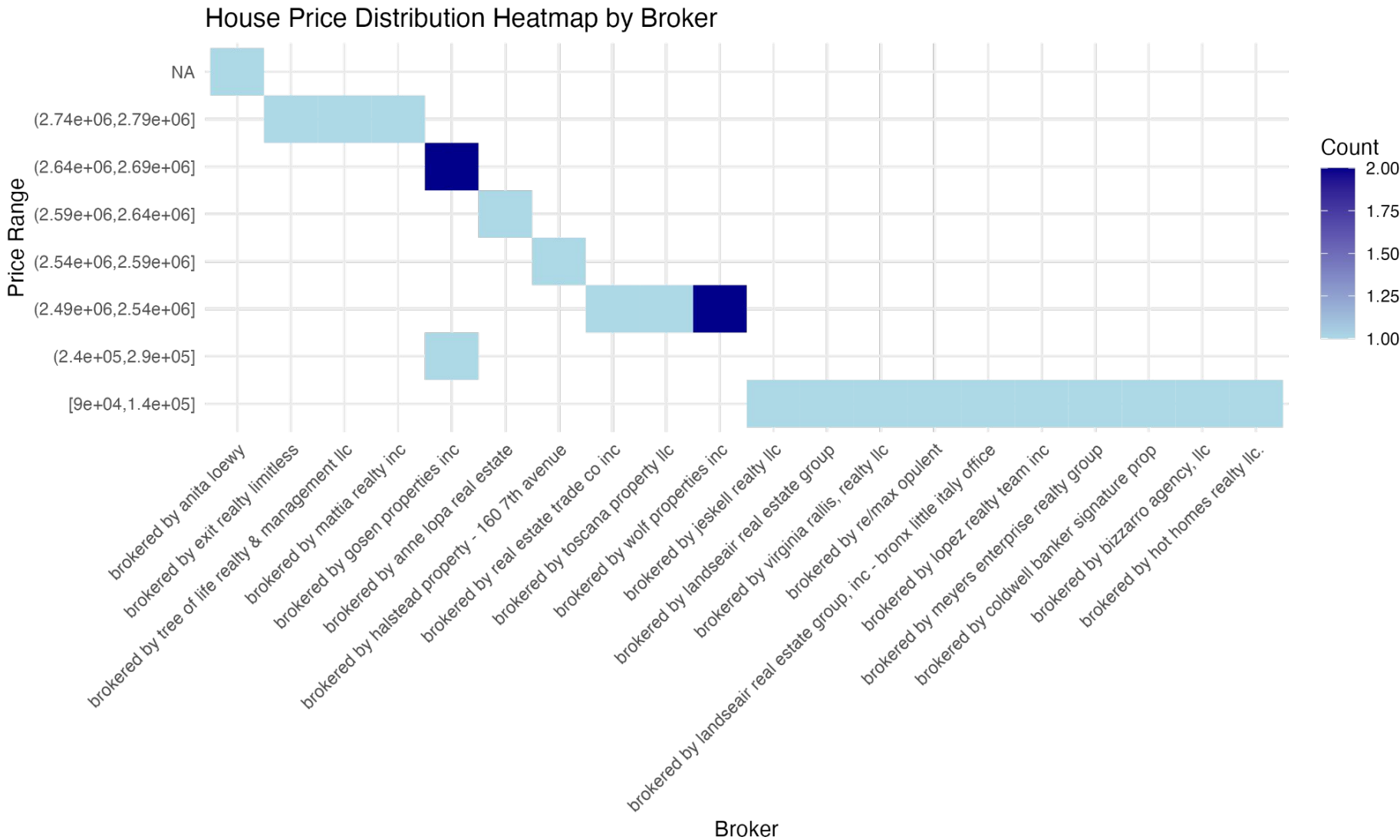
The Number of Retail Establishment by Zip Codes



Topic 6: Property Type Counts



Topic 7: House Price Range Distribution Across Top and Bottom Brokers



Topic 8: Impact of Broker Influence on Property Values Across Different Square Footages

Scatter Plot of House Prices vs. Property Square Footage



Thank You!