

# Story4\_Data608

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# Defining Business Question

- Task is to analyze NYC Airbnb listings, determine what drives revenue and occupancy, and present insights in a clear, data-driven slideshow.
- Where are the best investment opportunities? (Identify high-potential but undervalued listings.)
- How can underperforming hosts improve? (Identify common mistakes & provide actionable advice.)
- Why should new hosts list on Airbnb? (Highlight profitable areas & market demand.)

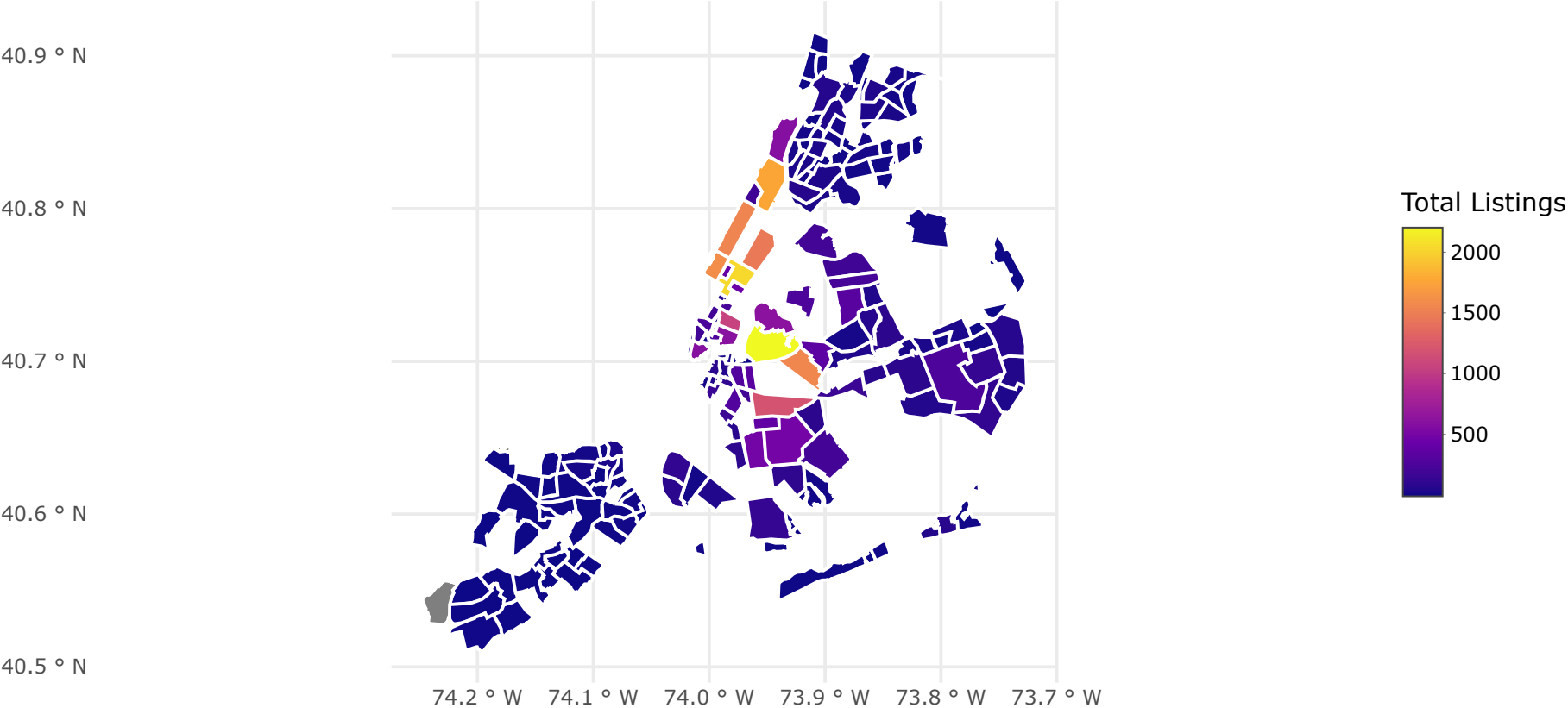
# Task to Create a Story:

- Where are the best investment opportunities? (Identify high-potential but undervalued listings.)

# **Data-Driven Story: Where Are the Best Airbnb Investment Opportunities in NYC?**

# Airbnb Listings Density Map

Number of Airbnb Listings by NYC Neighborhood



# Key Insights:

- The yellow and orange areas represent neighborhoods with the highest number of Airbnb listings.
- The dark blue areas indicate fewer listings, suggesting less Airbnb activity in those neighborhoods.

# The highest concentration of listings:

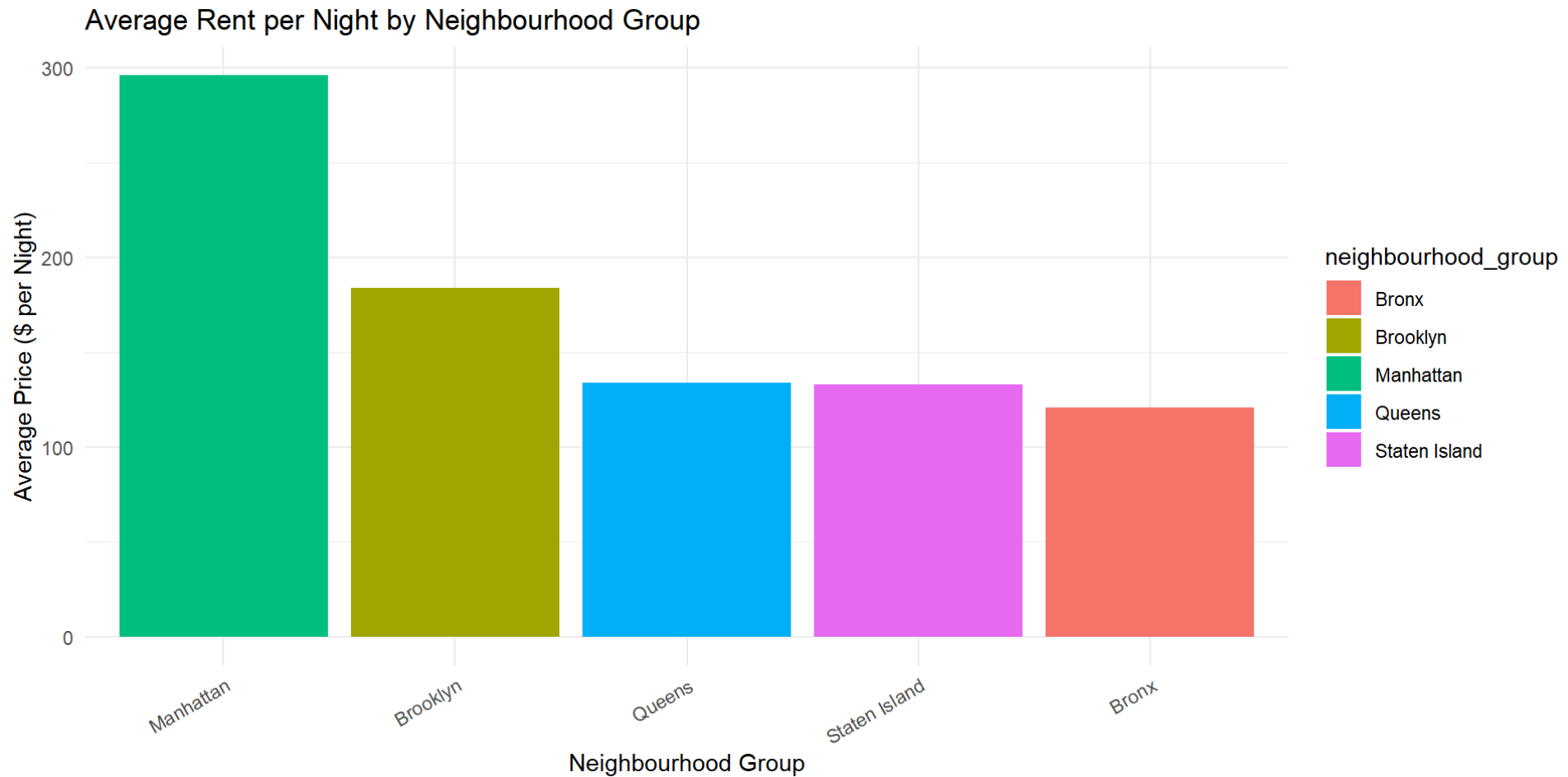
- Appears in parts of Manhattan and Brooklyn, especially around Midtown Manhattan and Williamsburg.
- These areas are prime Airbnb hotspots, likely due to strong demand from tourists and business travelers.
- Many parts of Staten Island, the Bronx, and Queens have significantly fewer listings.
- These areas may have lower tourist demand or stricter short-term rental regulations.
- Business Implications & Investment Insights

# Business Recommendations:

- High-Listing Neighborhoods indicate strong demand, but competition is high.
- Hosts should differentiate by offering premium amenities and unique experiences.
- Low-Listing Neighborhoods may present opportunities for growth if demand exists but supply is limited.
- Potential for targeting budget travelers and longer stays.
- Staten Island & the Bronx investors should assess whether Airbnb restrictions or low tourism impact listing growth in these areas.



# Average Rent per Night by Neighbourhood Group



# Key Insights:

- Bronx, Queens, and Staten Island offer the lowest average nightly rates – ideal for budget-conscious travelers.

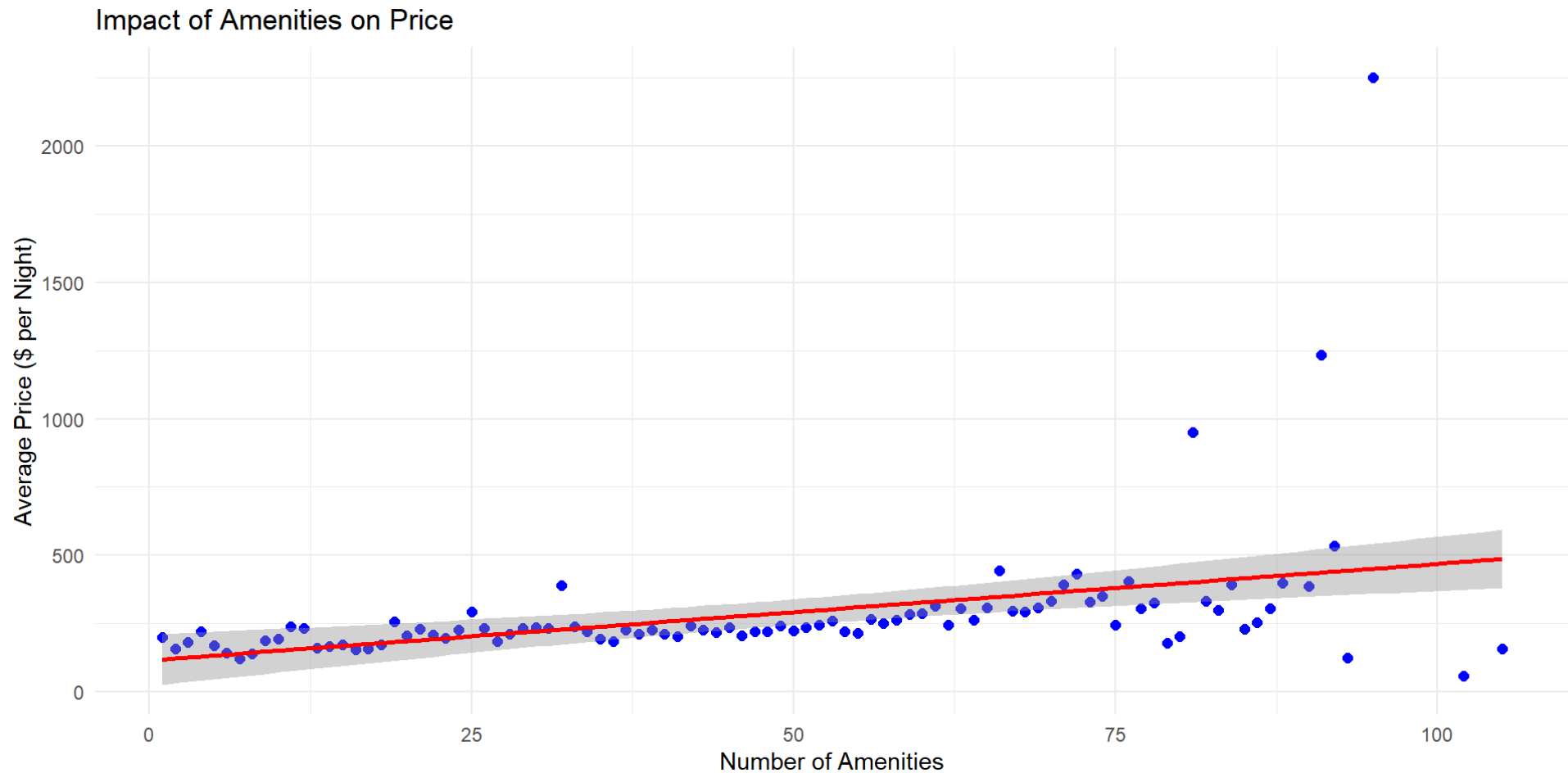
# Business Suggestions:

- Some Neighbourhood Groups Have Significantly Higher Prices: highlight premium amenities to justify the price
- Lower-Priced Neighbourhoods May Attract Budget Travelers: Hosts should focus on volume (more bookings) and offering discounts for longer stays.
- Low-priced areas: Improve listing quality (better photos, amenities) to compete with premium areas.

# Proving: “Highlight Premium Amenities to Justify the Price” with Data

- To support this claim, we need to analyze:
- How amenities impact price – Do listings with premium amenities charge higher prices?
- Occupancy vs. amenities – Are premium listings getting booked frequently?

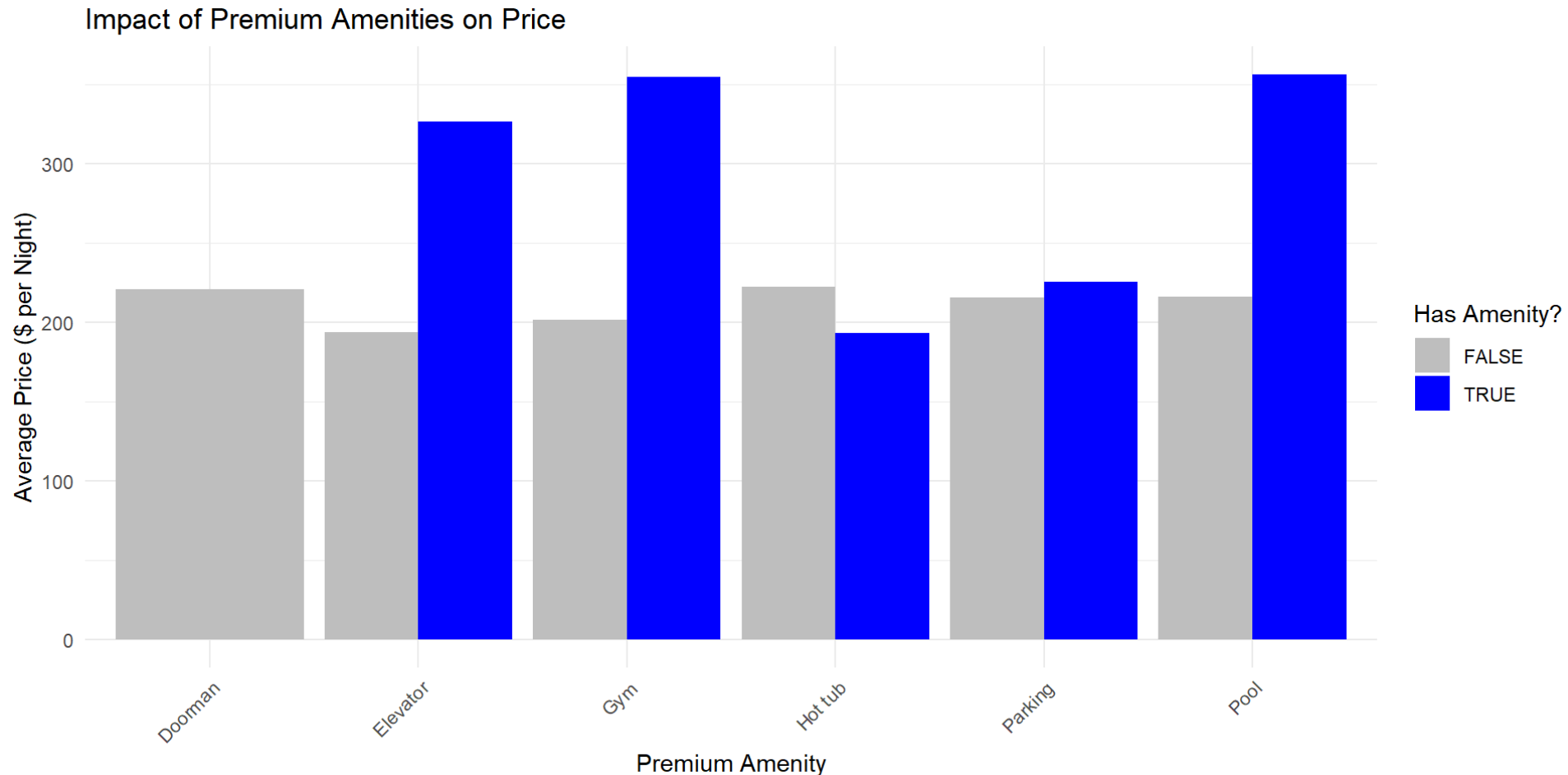
# Evidence: Listings with More Premium Amenities Have Higher Prices



# Key Insights:

- Listings with more amenities tend to have higher average prices.
- Basic listings (few amenities) cost less compared to fully equipped ones.
- The positive trend suggests that hosts can charge a premium by offering more features.

# Evidence: High-Value Amenities Are Present in High-Priced Listings



# Key Insights: Listings with Premium Amenities Charge Higher Prices

- Gym, Pool, and Elevator significantly increase the price per night.
- Listings with a Gym or Pool have the highest average price.
- Properties with an Elevator also show a strong price increase.



# Some Amenities Have Less Impact on Price

- Doorman, Parking, and Hot Tub do not significantly raise prices.
- In some cases (Hot Tub), listings without the amenity have slightly higher prices, possibly due to other factors like location or luxury features.

# The Strongest Premium Factors

- Gym and Pool show the largest price difference between properties that have them and those that don't.
- These amenities are likely seen as luxury features that justify a higher rental price.

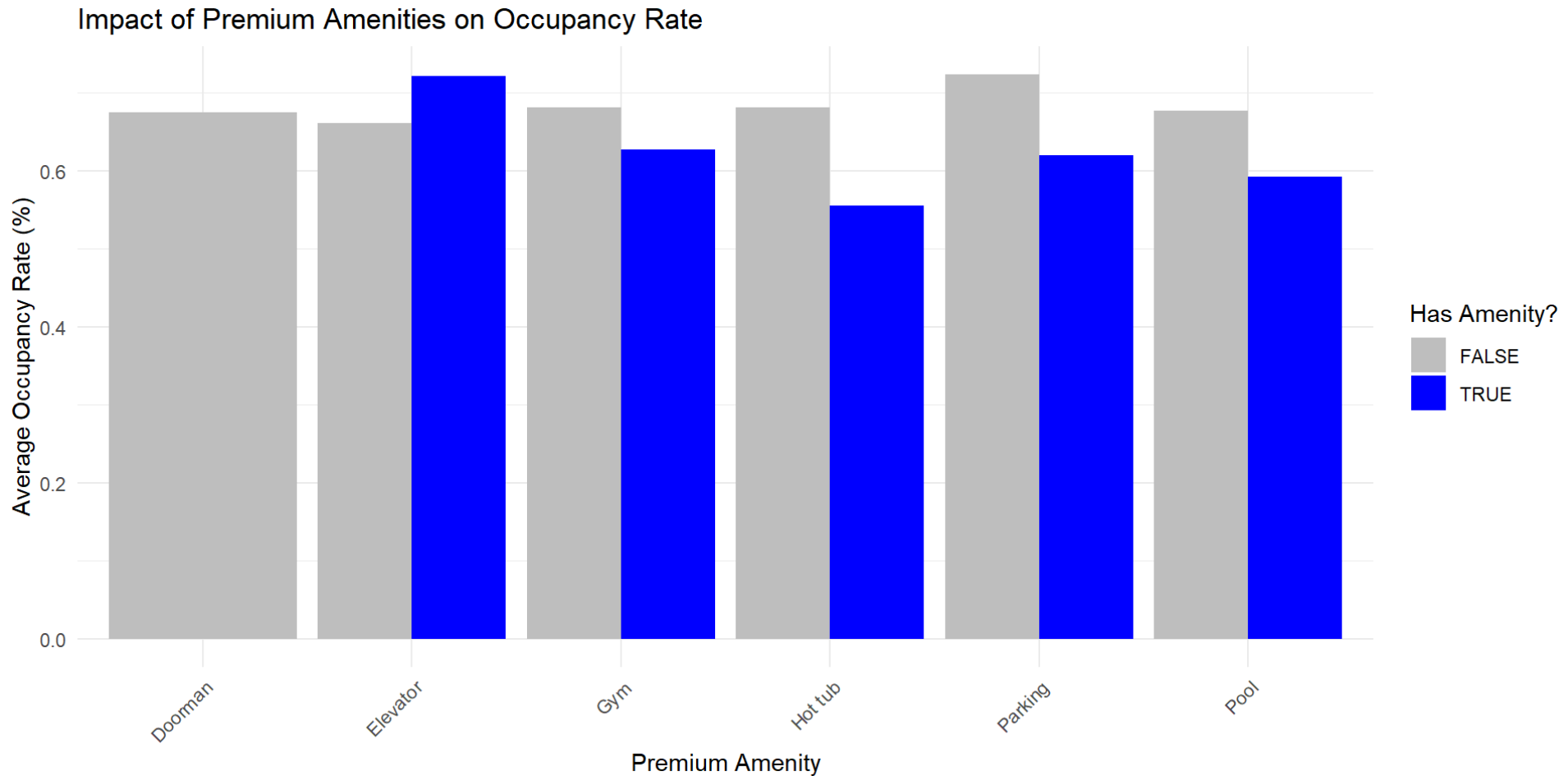
# Business Suggestions:

- Highlight Premium Amenities in Listings
- Hosts with Gyms and Pools should actively promote these features in their listings to attract higher-paying guests.

# Invest in High-Impact Amenities

- If targeting high-end renters, adding a gym or pool can justify higher pricing.
- Elevators may be more attractive for guests staying in high-rise buildings.

# Evidence: Premium Amenities Also Boost Occupancy



# Key Insights:

- Elevator is the Only Amenity That Boosts Occupancy
- Listings with Elevators have a higher occupancy rate than those without.
- This may reflect demand from guests looking for accessibility or higher-floor apartments.

# Other Premium Amenities Reduce Occupancy

- Surprisingly, listings with Gyms, Pools, Parking, or Hot Tubs tend to have lower occupancy than listings without them.
- This suggests these features may raise prices but don't necessarily attract more frequent bookings.

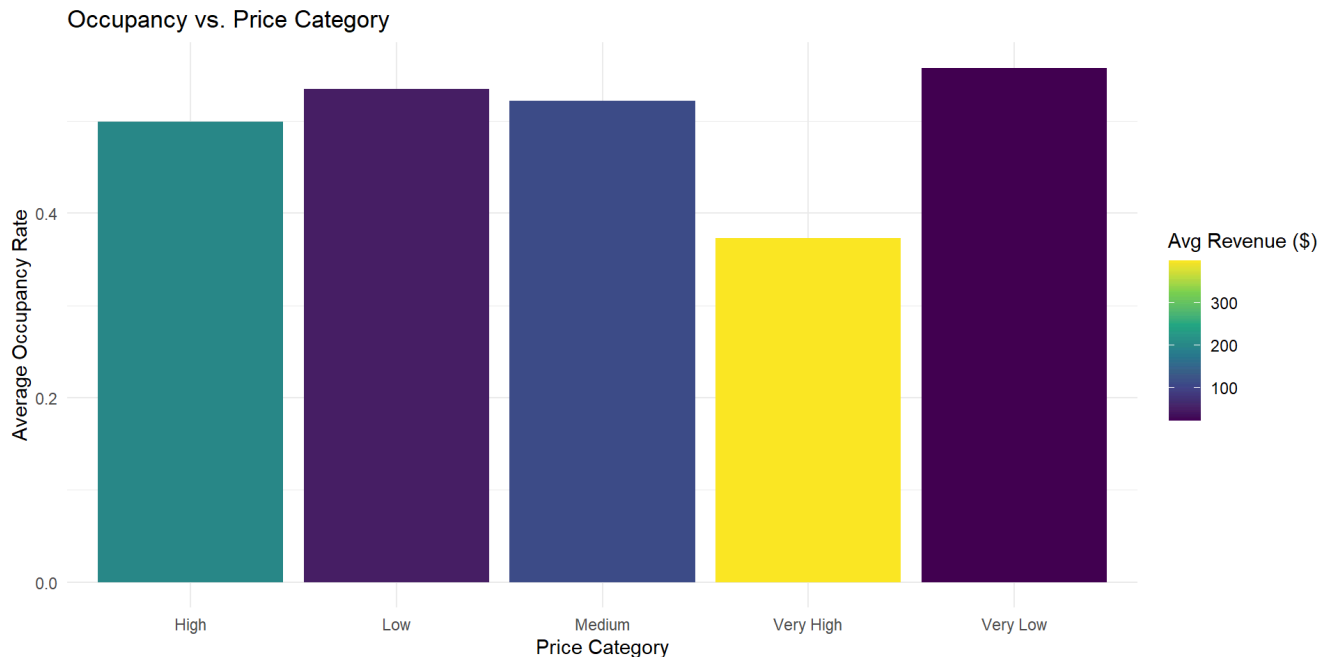
# Basic Listings May Be Booked More Often

- Listings without premium amenities tend to have higher occupancy rates, possibly because:
- They are more affordable.
- They appeal to budget travelers or short-term stays.
- Overpriced luxury listings may get booked less frequently.



# Low-Priced Areas Have Decent Occupancy Rates

- Let's check if these areas also have good occupancy, supporting the “volume strategy”.



# Key Insights:

- Very Low-Priced Listings Have the Highest Occupancy
- These listings are booked most frequently, likely because they are affordable and attract budget-conscious travelers.
- However, their average revenue is the lowest (dark purple), due to low pricing despite high demand.

# Low and Medium-Priced Listings Also Perform Well

- High occupancy with slightly better revenue than the very low category.
- Ideal for hosts targeting volume-based strategies (frequent bookings, possibly longer stays).

# Very High-Priced Listings Have the Lowest Occupancy

- These listings are booked less frequently, likely due to being out of range for average guests.
- But they generate high average revenue (yellow color), meaning they make up for low volume with premium pricing.

# High-Priced Listings Balance Both

- Moderate-to-high occupancy and solid revenue — possibly best for stable income.

# Encouraging Longer Stays via Discounts

- Listings with low nightly rates and low minimum night requirements are common in lower-priced areas.

# Minimum Nights vs Price by Neighborhood Group



# Key Insights:

- Top Chart (Price): Manhattan clearly stands out with the highest average nightly price.
- Bottom Chart (Minimum Stay): Minimum night requirements are similar across boroughs, even though pricing varies.
- This pattern indicates potential to attract longer stays in lower-priced areas by offering discounts or flexibility.



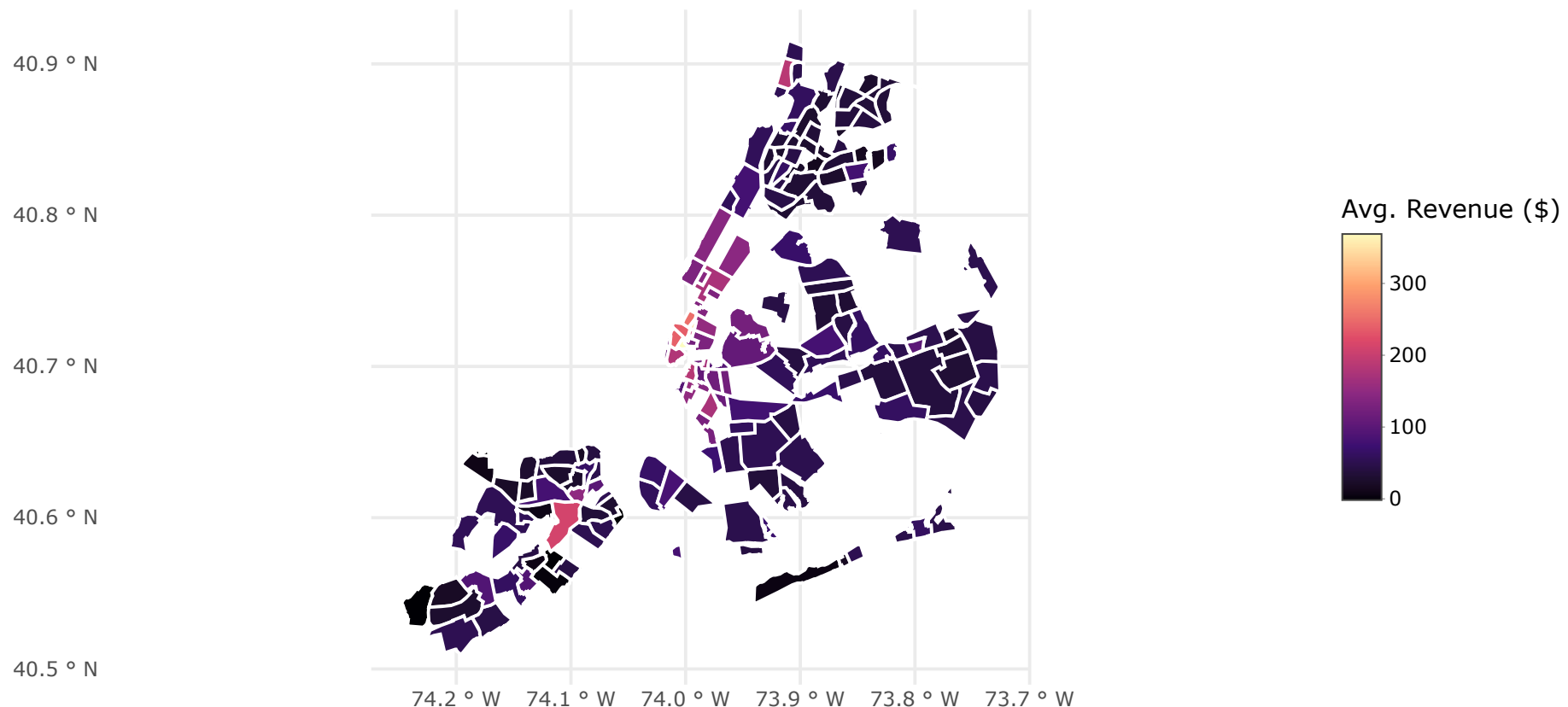
# Price Varies Significantly by Area

- Manhattan has the highest average price per night ( $\approx$  \$300), yet the same minimum stay requirement as other areas.
- Bronx and Staten Island have much lower prices ( $\approx$  \$100–150), even though their minimum night requirements are similar.

# High and low performing areas:

- Low demand neighborhoods, leading to low revenue whereas high-revenue areas can guide where to invest.

Airbnb Revenue Across NYC Neighborhoods



# Identifying overpriced and underpriced listings.

- Overpriced listings (high price, low occupancy) should adjust pricing.
- Underpriced listings (low price, high occupancy) could increase prices.



# Business Takeaways: For Investors & Hosts

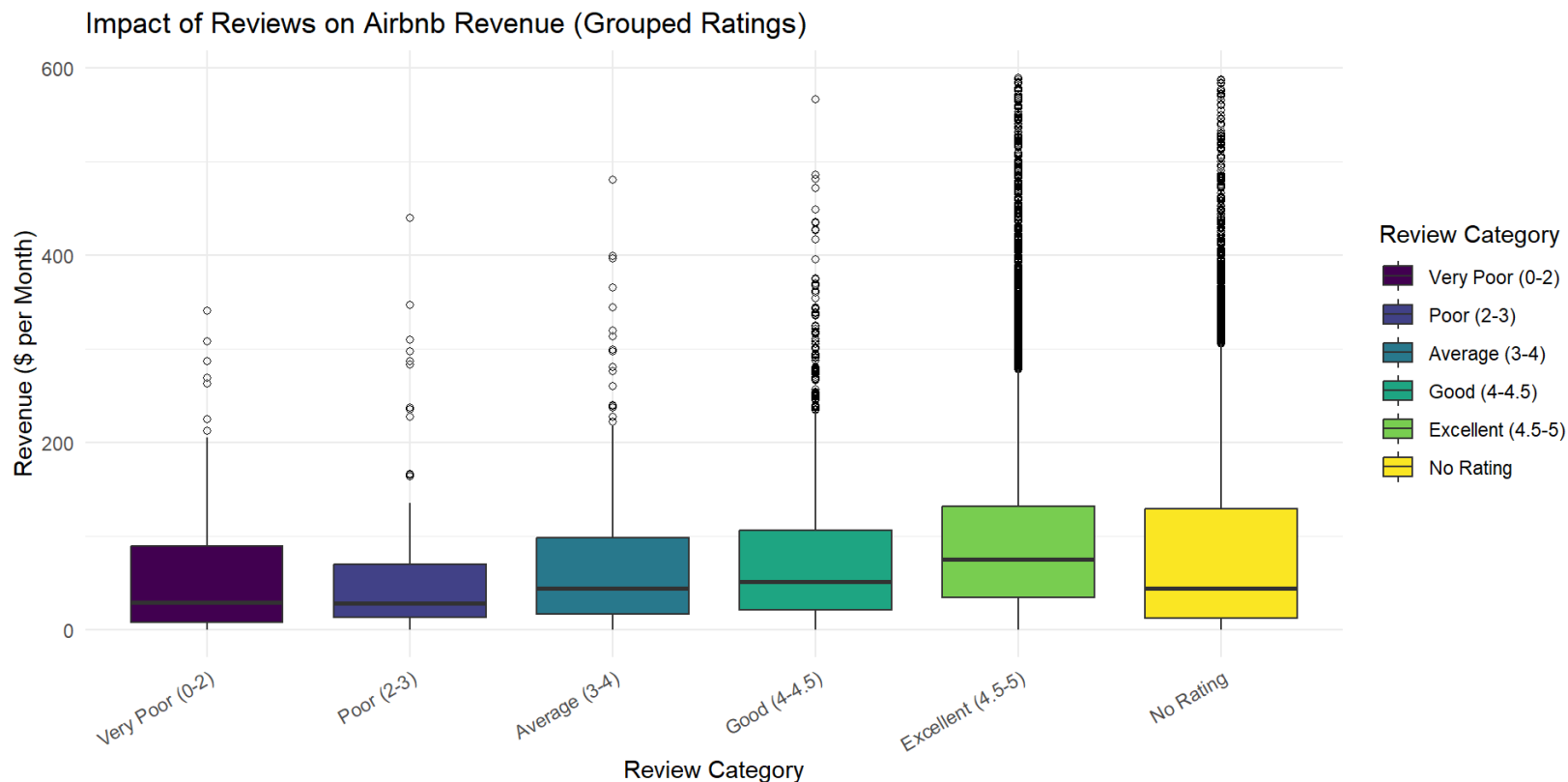
- Lower-priced listings attract high occupancy, good for maximizing booking rates.
- Mid-range listings balance occupancy and revenue well.
- Luxury listings make high revenue per booking, but require longer vacancy periods.

# For Pricing Strategy:

- Raising prices too much lowers occupancy significantly.
- Finding the right balance between price and demand is key.

# How guest Ratings Impact Revenue.

- This is the distribution of Airbnb revenue across different review rating categories.



# Higher Ratings Tend to Have Higher Revenue

- Listings in the Excellent and Good categories have higher median revenue compared to lower-rated properties.
- These properties also have a wider spread (higher variance) in revenue, meaning some highly rated listings earn significantly more.

# Lower-Rated Listings Generate Less Revenue

- Very Poor and Poor categories have the lowest median revenue, indicating guests avoid low-rated properties.
- These listings show lower variability, meaning even the best-performing ones in these categories don't earn much.



# Many High-Rated Listings Have Outliers

- Good and Excellent categories have a large number of high-revenue outliers
- This shows that some well-rated listings earn exceptionally well.

# Listings with No Ratings perform similarly to High-Rated listings

- The No Rating category has a similar revenue distribution to high-rated properties.
- Without ratings can still earn well, possibly due to strong location, amenities, or pricing strategies.

# Business Implications for Hosts

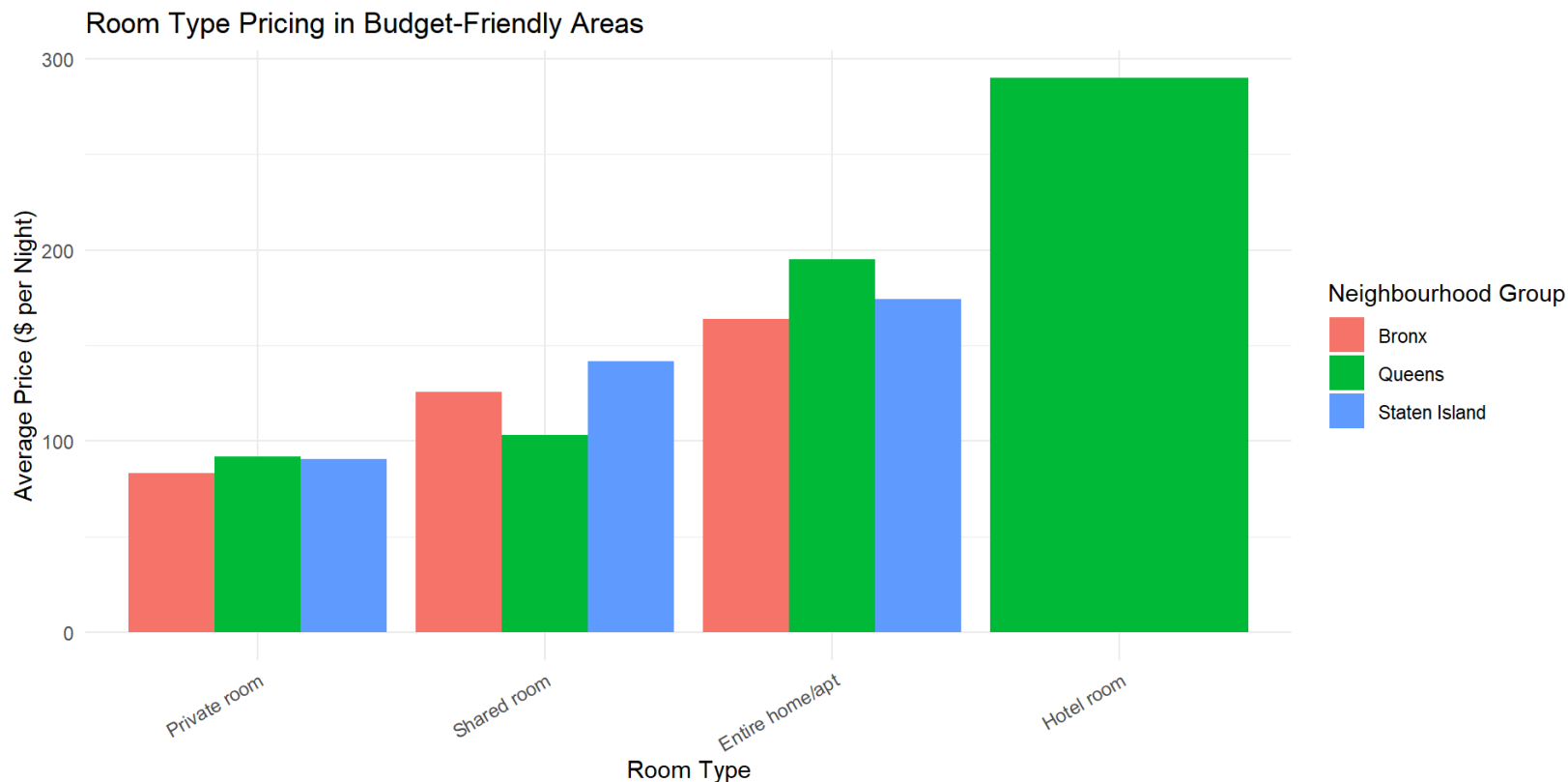
- Hosts should improve ratings to increase revenue potential.
- New listings without ratings can still perform well if they are competitively priced and well-marketed.
- Some low-rated listings still make money, possibly due to prime locations or unique offerings.
- Pricing strategy should align with rating trends—low-rated listings may need discounts to compete.

# Business Recommendations

- Hosts should lower their minimum night requirement to increase bookings and earnings.
- Hosts with long-term stays should offer competitive monthly discounts to attract guests.
- Identify tourist-heavy area, and allowing weekend and short stays will increase demand.
- Use Airbnb's "Smart Pricing" tool to optimize rates for different stay lengths.
- Provide weekly or biweekly discounts to attract longer-term guests while keeping high occupancy.

# Room Type & Pricing in Budget Areas

- Since budget travelers look for affordability, comparing lower-priced areas (Bronx, Queens, Staten Island).

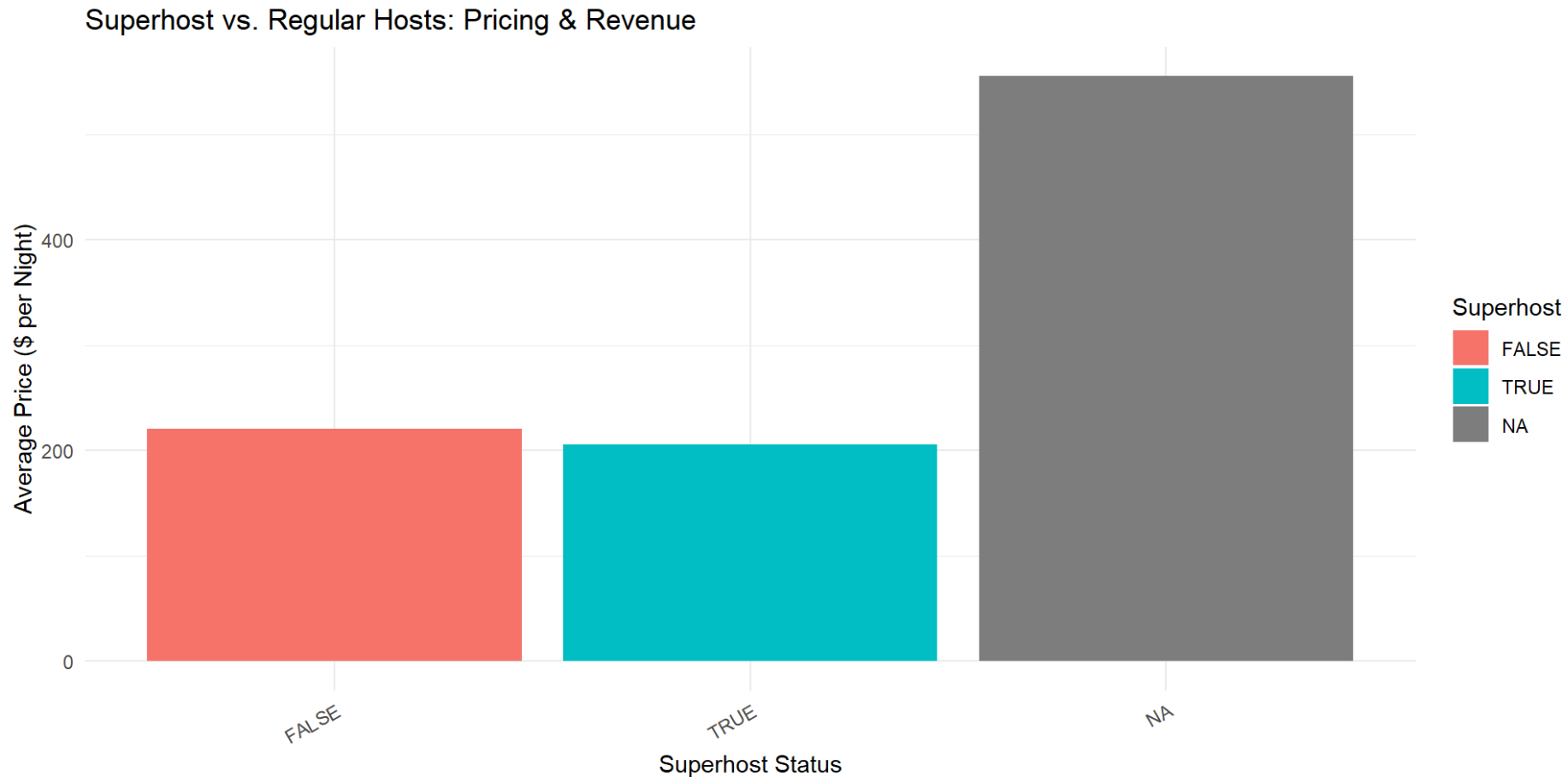


# Key Insights:

- Private rooms are the most affordable in these areas, making them attractive for solo travelers & budget tourists.
- Entire homes cost more, so these listings may need longer stay discounts to remain competitive.

# Do Superhost Charge More?

- Superhosts often have higher occupancy & pricing power.



# Key Insights:

- Regular Hosts FALSE charge slightly higher average prices than Superhosts.
- Avg price of 220 dollars for regular hosts reflects more premium or diverse listings among non-superhosts.



# Superhosts (TRUE) have slightly lower average prices.

- Avg price 210 dollars shows Superhosts may price competitively to maintain high occupancy and good ratings.
- NA values (unknown Superhost status) show very high average prices.
- Avg price 500 dollars likely due to missing or incomplete data
- Possibly luxury listings or commercial operators not marked as Superhosts

# Final Key Takeaways for Airbnb Investment Strategy

- Top-performing neighborhoods: Manhattan & Brooklyn (e.g., Midtown, Williamsburg) offer high revenue due to demand and premium pricing.
- Undervalued opportunities: Budget-friendly areas (e.g., Queens, Bronx, Staten Island) show strong occupancy and growth potential with lower competition.
- Recommendation: Invest in areas with solid occupancy but lower pricing—optimize with premium amenities and longer stays.