NYC AirBnB Market

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Agenda:

1. Problem and proposal
2. Our analysis and interpretation
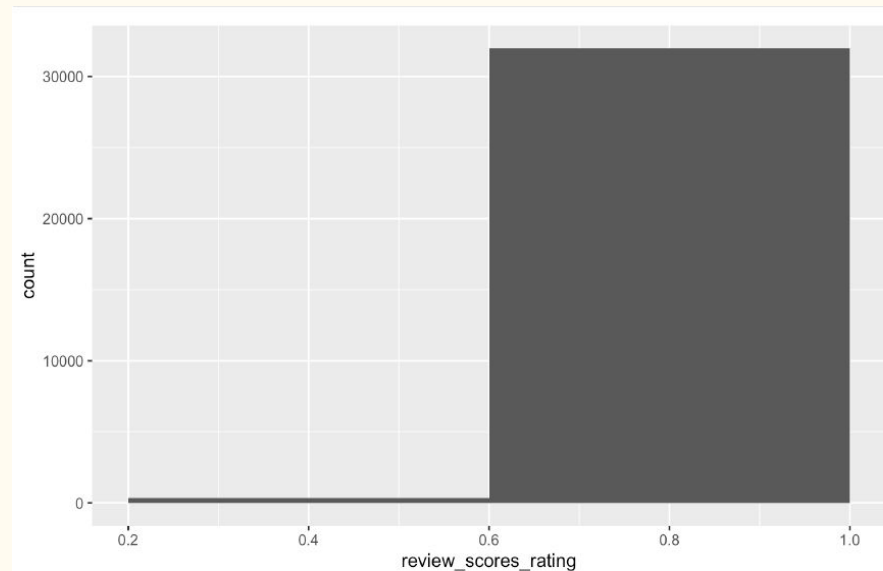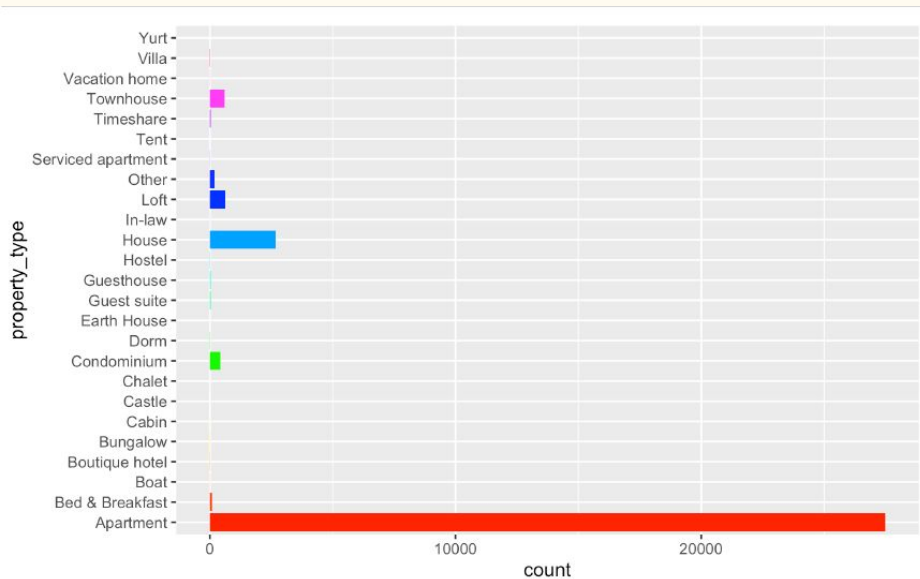3. Conclusions

Situation

Goal: Creating a **worthy investment** in a NYC AirBnB property

Things to Consider: Market Trends, Price Predictors, Neighborhoods & Target Guest Market

Outcomes: Determine the competitiveness of the NYC market, what affects price the most, and choose prime location

Overview of NYC's Airbnb Market

Most of the listings are apartments. Small subset of townhouses / small homes.

The market appears competitive give that the majority of review scores are higher than **0.6.**

Present Analysis

Price analysis
Feature analysis
Neighborhood clustering

Price Analysis

Findings:

- Independent Variables to Consider:
  - Accommodates, bedrooms, bed & bathrooms
- The larger your property in NYC is, the more expensive it will be to rent
  - In-line with real estate market
  - Increase in square footage = Increase in price

Recommendations:

- 2 most important factors: **Accommodates** & **Bathrooms**
  - Beds and bedrooms were strongly correlated to one another & accommodates
- These 2 factors can allow us to predict the log price of an NYC property
  - Determine price to charge
  - Can determine profit

Feature analysis - Cleanliness

Affects customers and hosts:

 Customers: provide more information about the place

 Host: attracts more customers

Cleanliness & Sanitary affects:

 Pricing, accommodates, host's experience, reviews and rating.

Feature analysis - Price range

Features	Budget	Below Avg	Above Avg	Pricey
Property type	Apt, BnB	Guesthouses, Hostel	Hotels, Condo	Boat, Castle
Room type	Entire location		Private rooms	
Accommodates	1-2	2-3	3-5	>5
Cleaning	No fees		Has fees	
Neighbourhood	Outside Manhattan island		On the Manhattan island	

<u>Features & price range correlations:</u>

This will predict whether your airbnb price range in according to the features it offers

Feature analysis - Cancelation policy
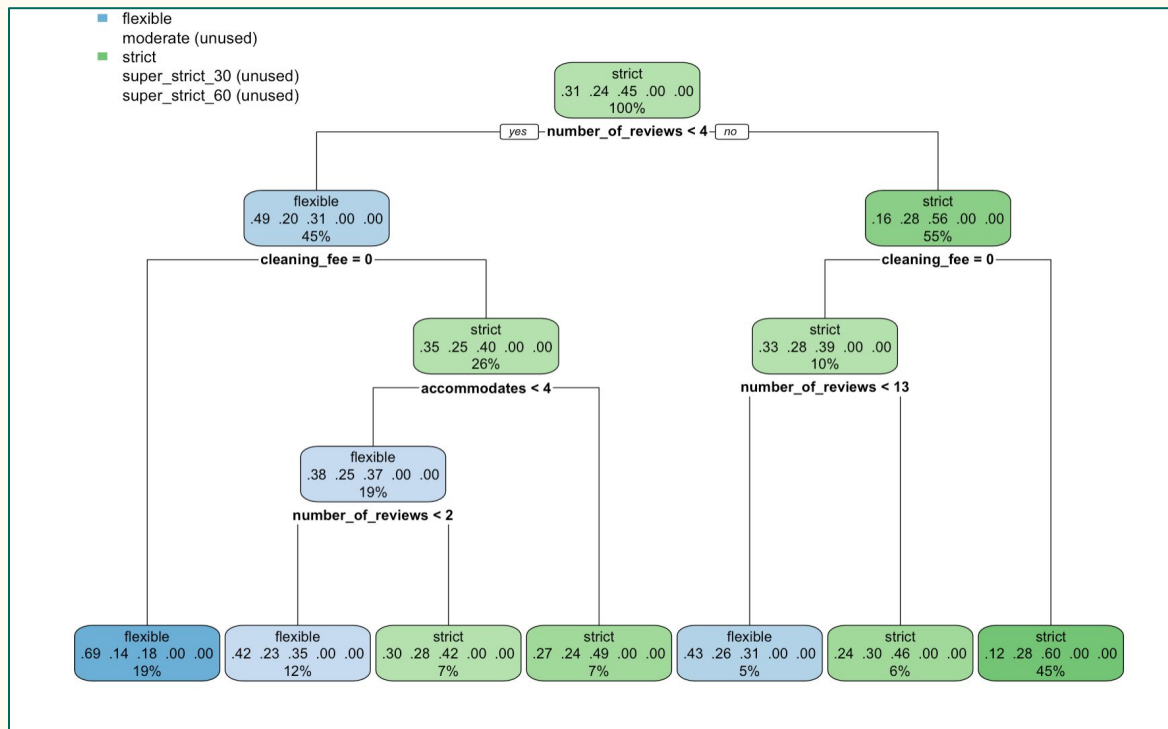
With your property, why should you worry about cancellation policy?

Features and policy:
    More features means stricter policy

Clustering - Data Prep

- Compactness & Sum of Squares
  - How similar the neighborhoods in a group(cluster) are
  - Measures the deviation of data points away from the mean value
  - Lower SOS = better
  - Can be used to determine optimal value for k
- Silhouette Plot & Cluster Line Plot
  - Used to assist in determining the k value based on silhouette width and/or negative measurement as well as visualizing data for analysis
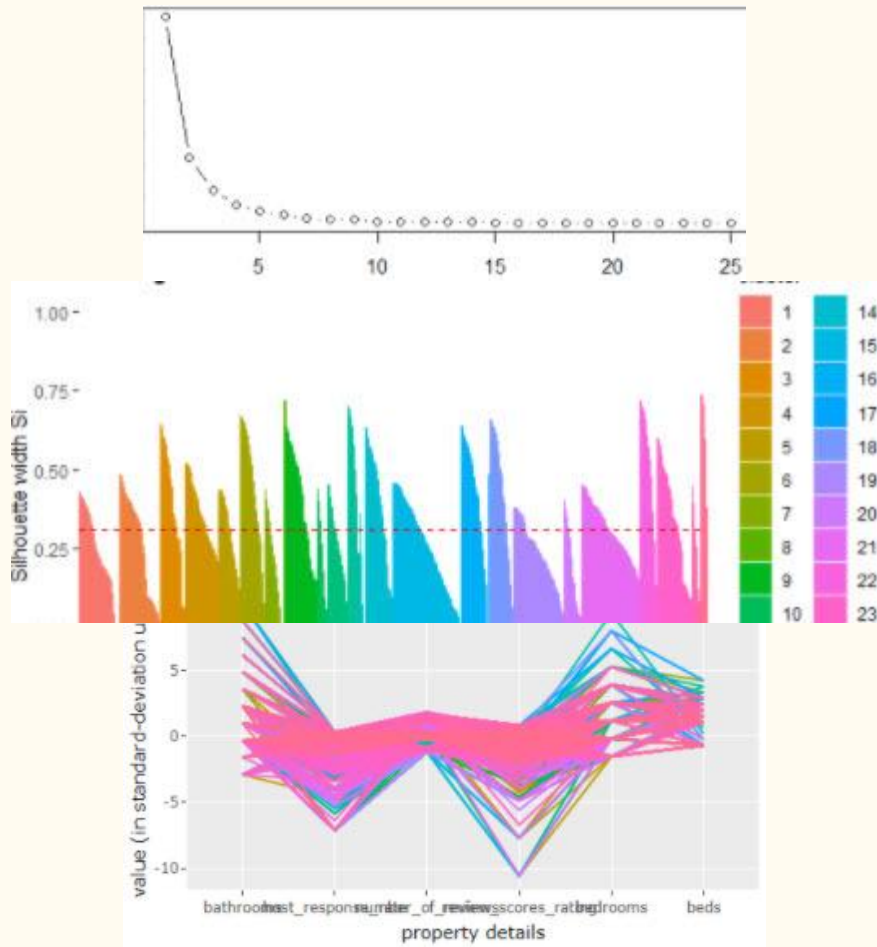
Clustering - Analysis & Findings

- Neighborhood Findings
  - # of reviews tends to be higher in more trendy and/or touristy neighborhoods(Times Square, Midtown, Brooklyn, Villages)
    - This doesn't always mean reviews are higher *scores* as the guests play just as large a part in that as the accommodations and hosts do
  - Cost rises as you work your way into neighborhoods such as those mentioned above that cater towards higher paying guests that expect more and want to be in a convenient location
    - With this, we also saw correlation between higher price/location/reviews/host response
- 3 Guest Segments Developed
  - Needy Nehemiahs; need attention, need privacy, and need beauty rest. Rentals focused on these customers found their way into the top slots for review scores
  - Expectations Met Mickeys; pay the most, knew what to expect, no quick host response needed, don't leave the highest # of reviews, though when they do they're typically high review scores
  - Bargain Shoppin' Betsys & Not Happy Hanks; stayed at places with lowest # of bathrooms and bedrooms(beds in general), as well as lowest price tags. This is that couple that isn't in NYC to explore the city and all they're doing at the AirBnB is sleeping

CONCLUSION

Investment Recommendation

- # of guests accommodated & bathrooms
- Cleaning & fees
- Cancellation policy
- Location/neighborhood
- Investors level of effort

Thank you for listening

Question & Answer