**Group 1**  
ISQS 3352 - Data Visualization  
11/16/24

**Airbnb Case Study: Tableau Dashboard Report**

**Introduction**

Airbnb has transformed the hospitality industry by offering a platform that allows homeowners to rent out their properties. This report analyzes data from New York City Airbnb rentals, using a Tableau Dashboard to uncover trends and insights. *The primary focus is to identify borough-specific rental trends, profitability, and factors affecting rental prices.* The analysis aims to provide actionable recommendations for current and potential hosts while highlighting how Airbnb has grown its presence in NYC.

Through this project, we employed an **exploratory approach** to investigate borough-specific trends, price breakdowns, and host profitability. By understanding these factors, we can provide a comprehensive overview of the Airbnb ecosystem in NYC and its future opportunities.

**Analysis and Findings**

**Borough Trends and Rental Types**

* **Borough with the Most Listings**: *Manhattan leads the Airbnb market with* ***17,334 listings****, followed closely by Brooklyn with* ***15,688 listings****.* These two boroughs dominate the short-term rental market due to their dense population and attractions. Queens, The Bronx, and Staten Island follow with significantly fewer listings.
* **Rental Types by Borough**:
  + **Manhattan**: Entire homes/apartments dominate with **10,969 listings**, catering to tourists and business travelers looking for privacy.
  + **Brooklyn**: Private rooms are slightly more popular than entire homes, showing a preference for affordable, shared spaces in residential areas.
  + **The Bronx and Staten Island**: These boroughs offer fewer listings, mainly targeting budget-conscious travelers or those seeking quieter neighborhoods.

***Key Insight****: Hosts in boroughs like The Bronx or Staten Island may find opportunities to attract guests by marketing affordability and unique experiences.*

**Affordability and Geographical Features**

* The **Bronx** emerges as the most affordable borough, while **Manhattan** has the highest average rental prices due to its central location and proximity to key attractions like Central Park and Times Square.
* Geographical features play a significant role in pricing:
  + **Proximity to public transportation** increases rental desirability.
  + **Tourist hubs and business districts** drive higher prices in Manhattan and Brooklyn.
  + Queens, with its mid-range prices, provides an excellent balance for renters seeking access to JFK Airport and Flushing Meadows.

***Key Takeaway****: Hosts should tailor pricing strategies based on the unique features of their borough and location.*

**Listings Over Time**

* Airbnb experienced its **largest growth in new hosts in 2015**, with over **4,000 new listings** added that year. This rapid expansion reflects the platform’s increasing popularity and profitability.
* Listings have stabilized in recent years, indicating that the NYC Airbnb market has matured and reached a competitive equilibrium.

**Airbnb Revenue Trends**

* Airbnb’s revenue from NYC rentals has grown steadily, peaking around **2015–2016**. By **2022**, annual revenue surpassed **$25 million**, showcasing the platform’s ability to generate significant profits in a single metropolitan area.
* *The year-to-year revenue trends suggest that NYC remains one of Airbnb’s most lucrative markets.*

**Host Profitability**

**Most Profitable Hosts**

* The analysis reveals that certain hosts dominate the profitability landscape:
  + **RoomPicks By Victoria** earned the most, with **$248,148 annually**.
  + **RoomPicks By Antony** and **Blueground** follow, earning **$177,724** and **$149,126**, respectively.
* **Common Traits of Successful Hosts**:
  + They manage **multiple properties** in high-demand boroughs like Manhattan and Brooklyn.
  + Their properties cater to entire-home rentals, which command higher rates.

**Airbnb’s Earnings**

* Airbnb charges a **3% service fee** for every rental, meaning the platform itself earns a significant share of the overall revenue. In NYC, Airbnb’s annual earnings from service fees exceed **$750,000**.

**Customer Recommendations**

**For Current Hosts**

* *Focus on improving rental amenities*: Adding Wi-Fi, parking, and air conditioning can boost the property’s appeal and allow for higher pricing.
* *Prioritize reviews*: **Positive customer reviews** lead to better visibility and trust, which directly impact profitability.
* *Leverage location*: Hosts in boroughs like Brooklyn and Queens can market proximity to attractions and affordable rates to draw in budget-conscious travelers.

**For Potential Hosts**

* A prospective host, such as Julie in Queens, could charge **$125–$150 per night** for a 2-bedroom house.
* If Julie renovates her basement to add a third bedroom and second bathroom, she could charge **$175–$200 per night**.
* **Recouping Renovation Costs**: A $15,000 renovation would be recovered within **8–12 months**, depending on demand and occupancy rates.
* Julie’s main competition comes from neighborhoods like **Astoria** and **Flushing**, where rental prices for similar properties average around **$140–$160 per night**.

**Conclusion**

The Tableau Dashboard analysis highlights Airbnb’s dominance in NYC, driven by borough-specific rental trends, pricing dynamics, and host strategies. **Manhattan and Brooklyn remain the most profitable boroughs, but affordability in Queens and The Bronx offers unique opportunities for hosts.** The data-driven insights in this report can help current and future hosts optimize their strategies, enhance customer satisfaction, and maximize profitability.

*As Airbnb continues to evolve, leveraging data analysis tools like Tableau will remain crucial for maintaining a competitive edge in the dynamic short-term rental market.*

Corey: Aid in creating the questions we want to ask through visualization in the presentation. Also documented what kind of challenges we can face to be prepared in advanced. Helped Cody with the tableau worksheets by using the marks (color and tooltip) on the map, line, dual bar axis graphs.