**Group 1A: Airbnb and the Housing Market**

The group merged a data set from Zillow detailing average housing costs by month in the United States with data from Airbnb listings in the US. Most of the Airbnb listings were active in 2020.

The data was cleaned by making mismatched date formats in the Airbnb data set uniform and ensuring cities were all named the same. For example, New York City was sometimes identified as “New York” so these city names were altered to be labeled as one group. After the data was cleaned the data sets were merged and there were eleven cities used.

First, the group analyzed whether the number of Airbnb listings affected the change in home sale price over a period of time. Analysis showed that the number of Airbnb listings has little to no effect on the change in housing prices over multiple years.

Next, the group reviewed if there was any correlation between average housing prices and Airbnb reviews left per month in each city. Again, there was no correlation between average housing price and reviews left per month. Additionally, the price of Airbnb rental price and reviews per month were analyzed and the results also showed no correlation.

The group analyzed the correlation between house price and Airbnb price by city and found a moderate correlation. As a bonus in this section the type of Airbnb room types in each city was presented.

To find whether Airbnb’s owned by a company have any effect on the price of homes the group picked the number of Airbnb rentals to be designated as “owned by a company” as 5. From 2018 to 2020 the average price of homes rose at a similar pace with company- and privately-owned Airbnb’s. The price of company-owned homes was greater than those that were privately-owned over the two years. The group also counted the number of Airbnb’s in each city separated by company- and privately-owned.

The group took three large cities – one from each coast and one in the Midwest – and calculated the mean price, median price, total units, total reviews, and monthly reviews. San Francisco stood out as having significantly higher mean prices and the lowest number of units and monthly and total reviews while New York had by far the most total units, total reviews, and monthly reviews.

After this analysis the group would have liked to have more data from Airbnb regarding whether or not the listing was eventually sold and total revenue generated by each listing. It would have been beneficial to have more shared cities to provide more accurate data or measured correlations and more recent data from both Zillow and Airbnb.