

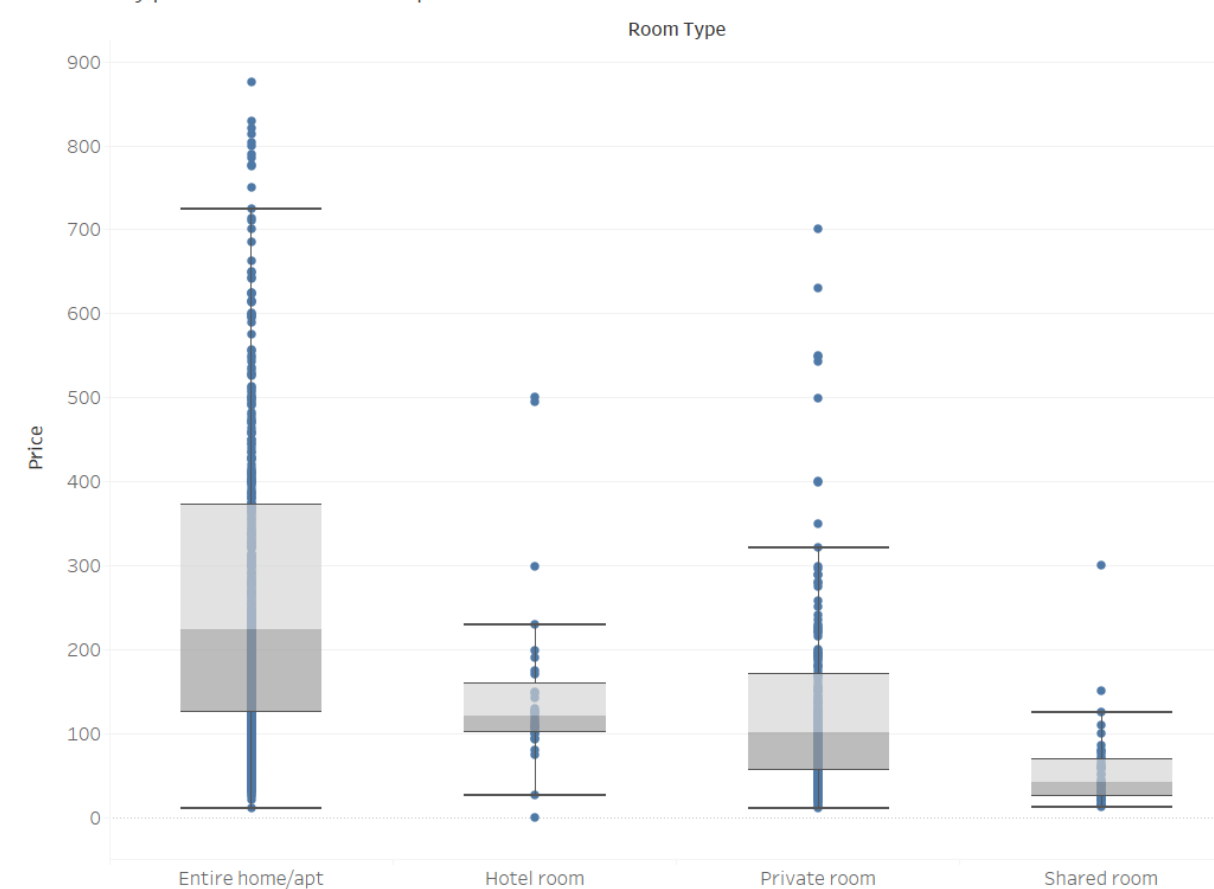
# Analysis of Airbnb Data in Chicago



## Motivation

Airbnb prices vary greatly with different room types and neighborhoods. The time of year and day of the week also affects the prices. This short analysis focuses on visualizing the different factors that influence price for Airbnb properties in the Chicago area. The data is from Inside Airbnb and was updated February 17th, 2021 and contains listings for 365 days.

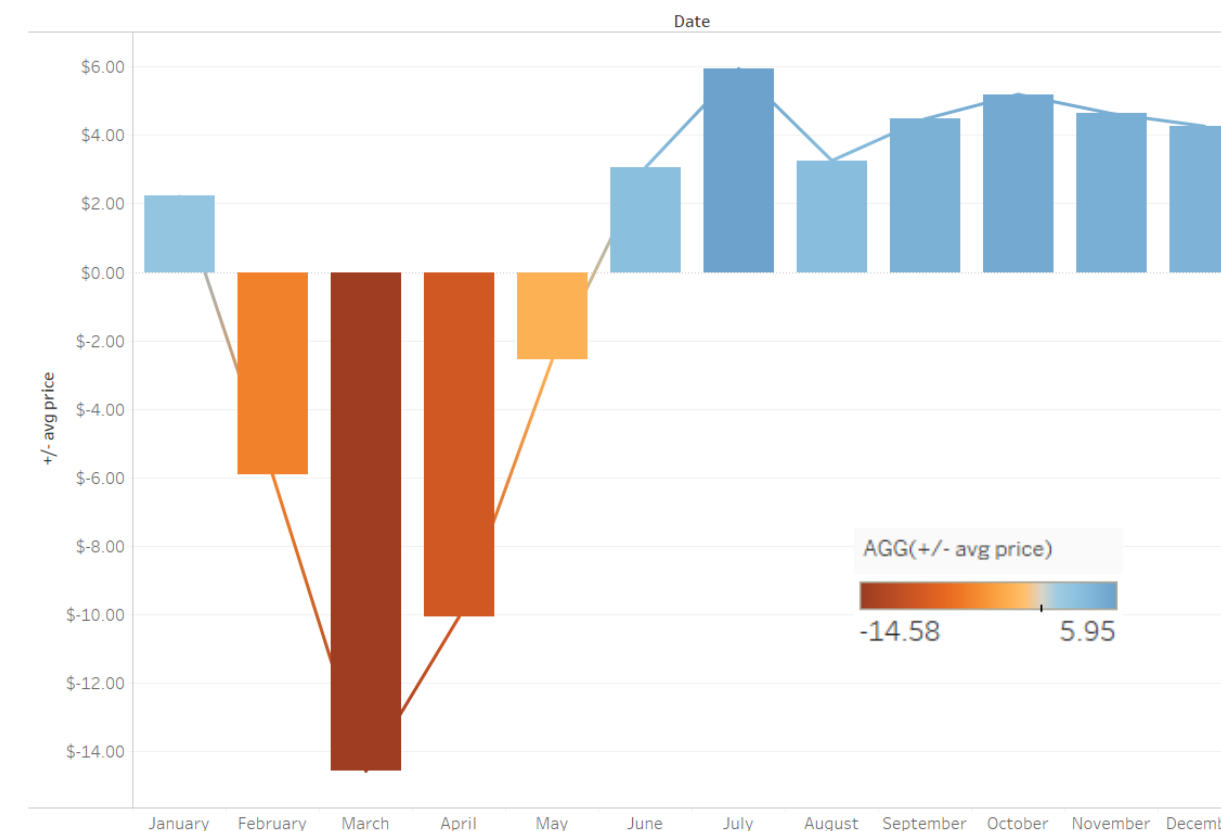
Room Type and Price Boxplot



## Room type

Inside Airbnb's data split the properties into four room types - Entire home/apartment, Hotel room, Private room, and Shared room. The distributions and spread of these room types are vastly different, with Hotel room and Shared room having the smallest spread and Entire home/apartment having the greatest spread. Every room type still has outliers (especially on the high end). The medians of the room types are as expected, with Shared rooms having the lowest median price and the highest median price being an entire home/apartment.

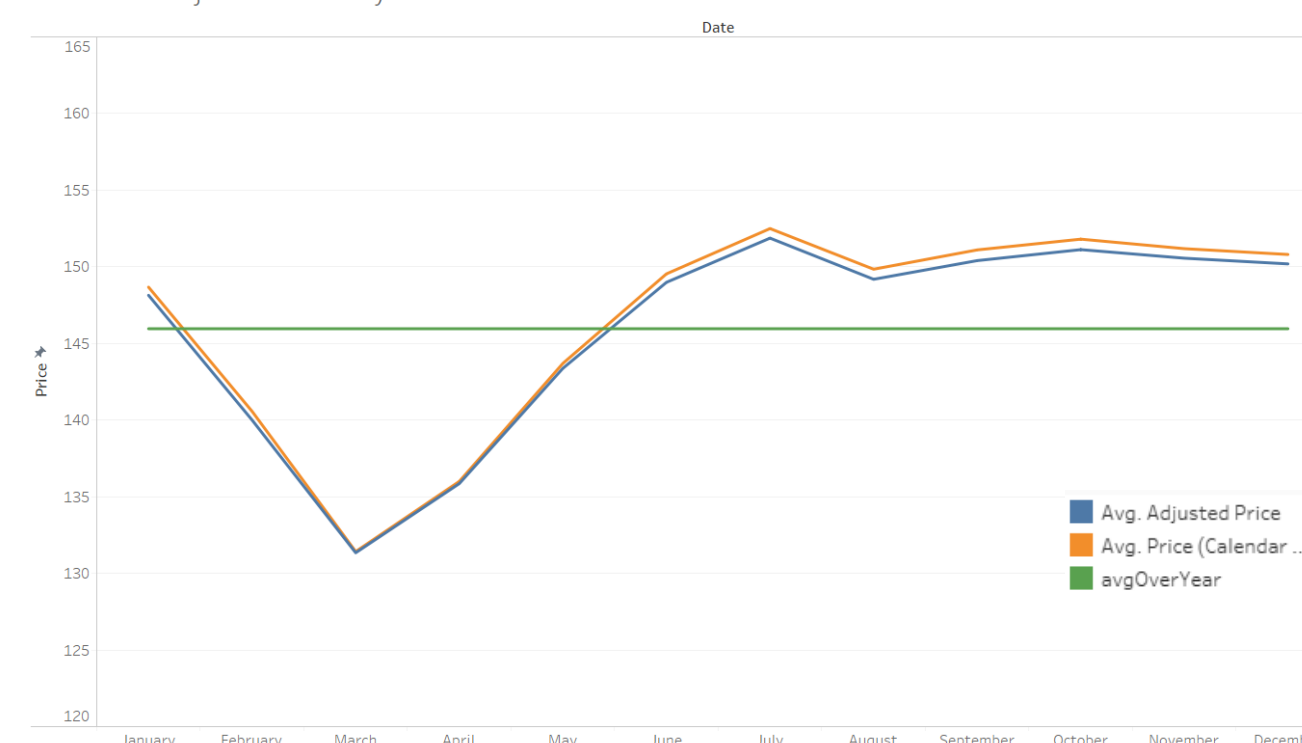
+/- Average Price per Month



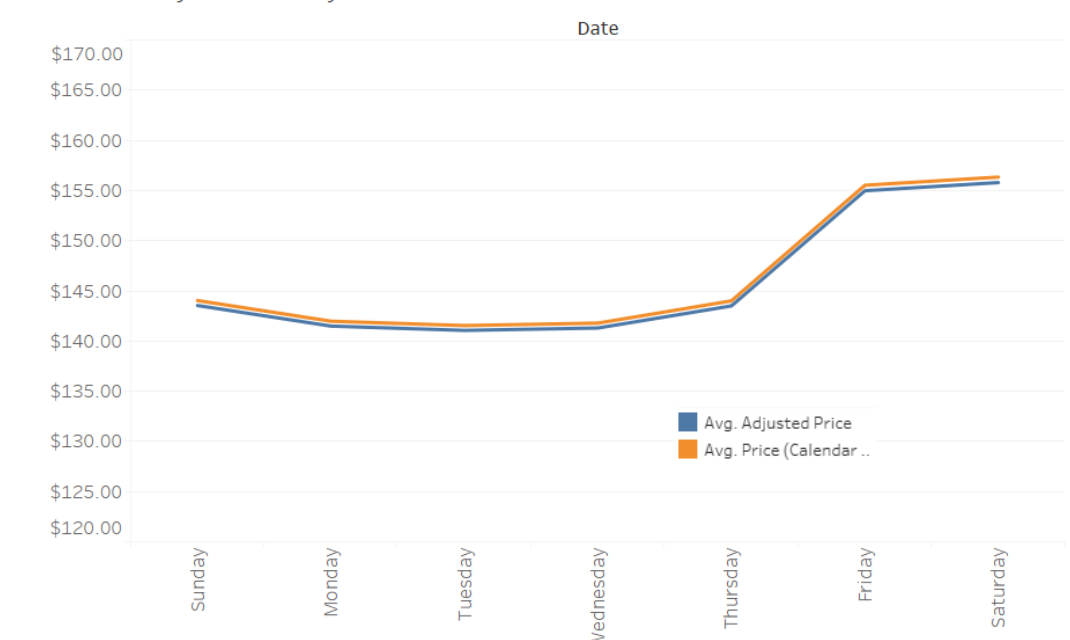
## Time of Year

Trends are shown by plotting out the average prices for months and the average price for the year, February, March, April and May all have lower prices when compared to the yearly price average, with March having the lowest average cost at about \$14 less than the yearly average. Prices are lower in the Spring and higher in the other seasons, with the highest prices being in July, in the Summer. There is a monotonic decline in prices starting from October until March.

Price and Adjusted Price by Month



Prices by Weekday



## Day of Week

As expected, the prices for Airbnb's Fridays and Saturdays are the highest amongst the days of the week. There is a slight dip in the prices going on Tuesdays, but it is almost negligible compared to the increase in prices on the weekends.



## Conclusions

Airbnb's prices are influenced by many factors, including a specific host's pricing and neighborhood. However, room prices depend on the room type, with many hosts charging a higher price than the spread of the prices. Additionally, these prices tend to fluctuate in a more predictable manner over the week as well as over the months in this year. The consumer can make better decisions for renting an Airbnb based on these factors. A website, comparebnb, was created in order to help in this process.