

Ask a question about your data

Bionic Blobs New York City Airbnb Data Project

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Bionic Blobs - New York City Airbnb Github Link
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Airbnb Listings in NYC

43K

Total Airbnb bookings in NYC 2009-2023

1M

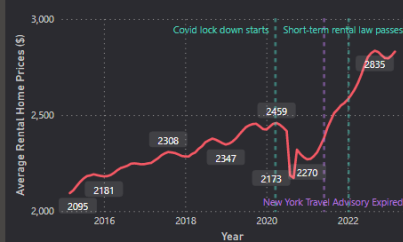
Population in NYC

8M

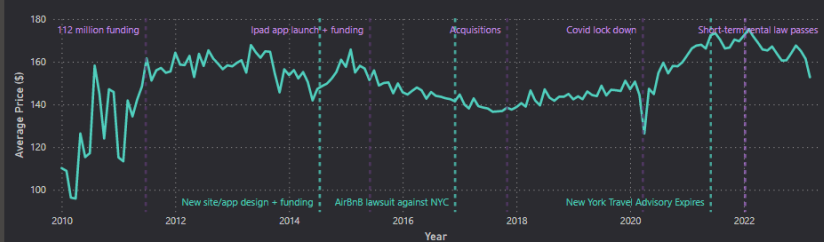
NYC Airbnb & Housing Market Trends



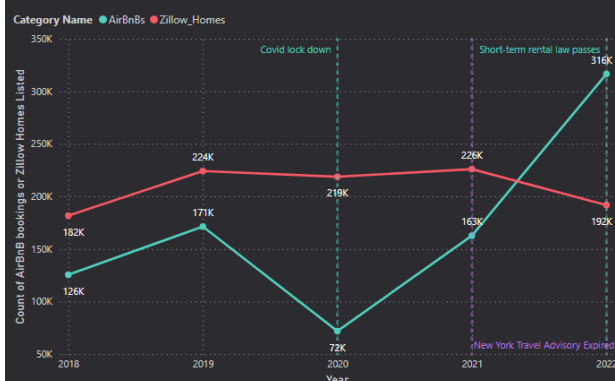
Average Price of Rental Homes on Zillow in New York City...



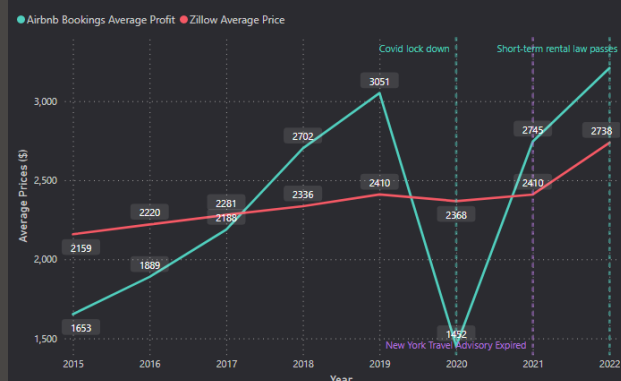
Average Price of Airbnb bookings in New York City by Year and Month



Count of Airbnb bookings vs Zillow Home Listings in NYC by years



Airbnb Average Profit vs Zillow Average Price on Rental Homes in NYC per year



NYC Airbnb vs Housing Market Insights

COMPARISON WITH ZILLOW HOUSING MARKET

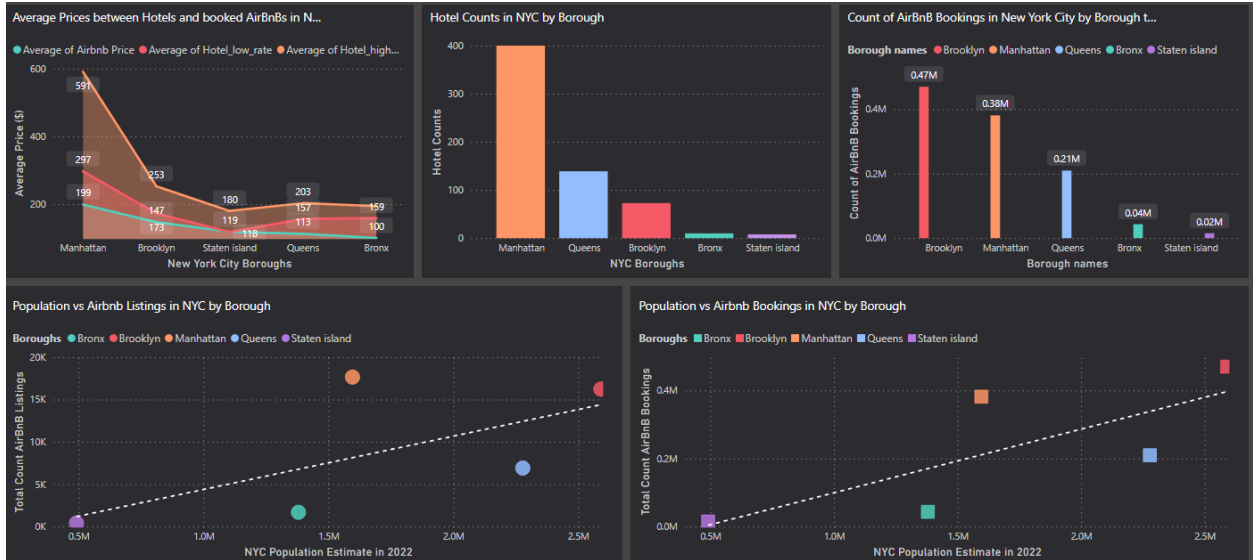
- Covid lockdown had a large negative impact on both Airbnb revenue and housing market sales
- Zillow listings count and Airbnb bookings both decreased in 2020 most likely due to Covid pandemic
- After 2020, as lockdown was lifted, both housing market and Airbnb popularity rose again
- However, as Airbnb bookings rise past 2021, Zillow housing listings decrease. With the short-term rental law passing in 2022 and being enforced in 2023 hoping to change Airbnb's possible effect on the housing market. Hopefully we can see trends supporting that in the near future.

How Hotels & Population affects NYC Airbnb Bookings



Airbnb Max and Min Pr...

Year	Highest Profit	Lowest Profit
2015	39,980.00	50.00
2016	34,965.00	35.00
2017	65,151.00	35.00
2018	115,200.00	40.00
2019	237,600.00	44.00
2020	48,600.00	20.00
2021	336,648.00	29.00
2022	437,244.00	20.00



Hotels and Trends in Boroughs

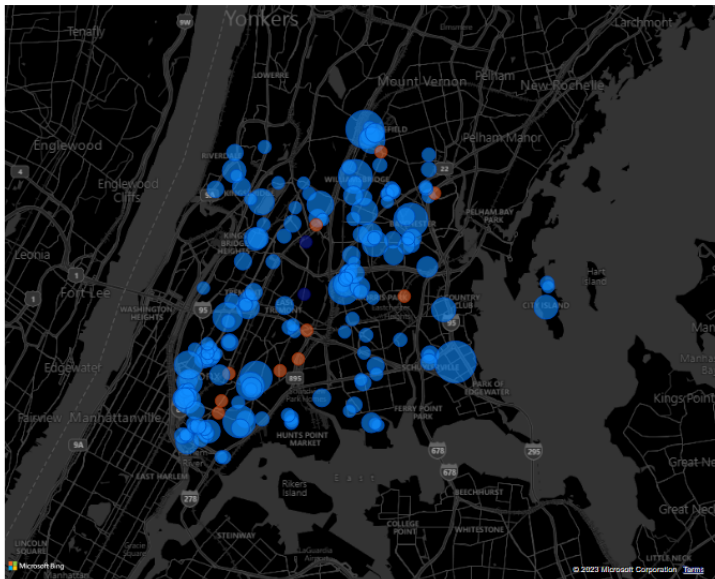
- Scatterplots show that Queens and Bronx are under the trendline, which means despite their population density, they support less than average airbnb listings and bookings.
- Scatterplots show that Manhattan is above the trendline showing that for its population density, it has an above average amount of airbnb bookings and listings.
- We see that hotels are prominent in Queens and Manhattan. This may explain Queens below average listing/bookings count for its population size because people using Queens could have more hotel options to stay at.
- This is also slightly seen in how Manhattan has the most listings, but second most bookings. Brooklyn beats out Manhattan in bookings possibly due to the fact that Brooklyn does not nearly have as many hotels as Manhattan and is forced to use Airbnb listings.

New York City Map

TIME MAP ATTRactions, AIRBNB BOOKINGS, HOTELS

AirBnB Bookings, Hotels, Attractions by Location over the years in New York City

Type of Location ● AirBnB ● Attraction ● Hotels



Year

2017

Borough Names

Select all

Brnx

Brooklyn

Manhattan

Type of Location

Select all

AirBnB

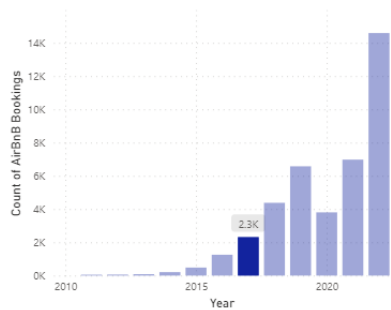
Attraction

Hotels

2009 2022

Count of AirBnB Bookings in New York City over the years

Borough names ● Bronx

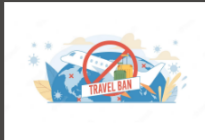


New York Population Density Heat Map

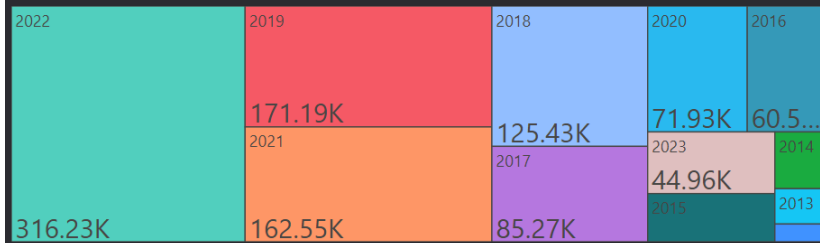
CLICK FOR WEB HEAT MAP FOR POPULATION DENSITY OF NYC MADE BY JIM HERRIES UPDATED 2018

- Observed some trends in neighborhoods where airbnb bookings would pop up near some hotel locations, but no definitive conclusion can be made.
- Tourist Attractions doesn't seem to be where airbnb bookings tend to pop up over the years
- After watching the bookings pop up through each year, it seems more likely that airbnb bookings follow highly populated areas of NYC which is why I included a supplemental heat map of population density of NYC not made my our team. However a more detailed analysis is needed.

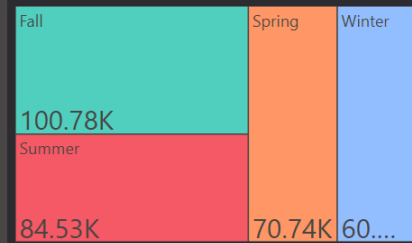
Seasonality & Holiday Travel Trends



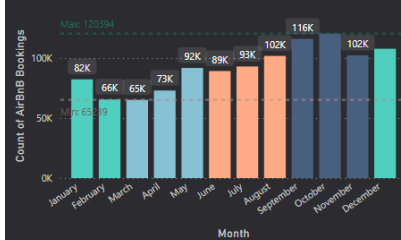
Count of AirBnB Bookings by Year, Season, Month, Holidays in New York City



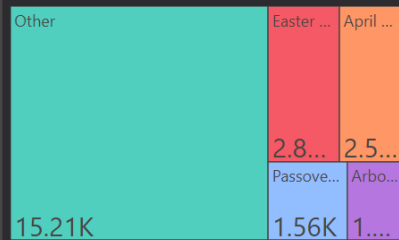
Count of AirBnB Bookings by Year, Season, Month, Holidays in New York City



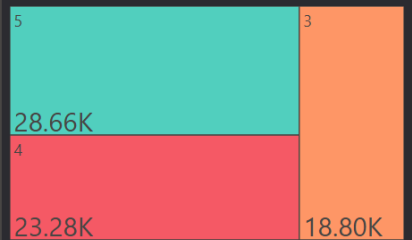
Count of Total Bookings of AirBnBs in New York City by ...



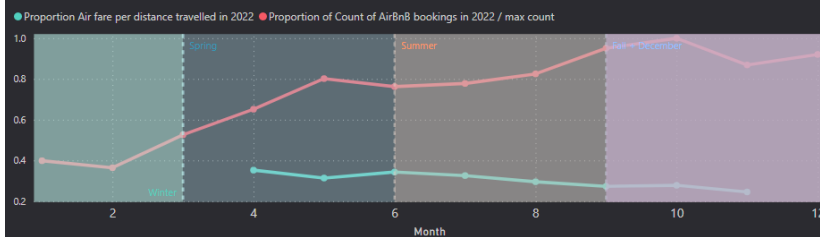
Count of AirBnB Bookings by Year, Season, Month, Holidays in New York City



Count of AirBnB Bookings by Year, Season, Month, Holidays in New York City



Possible Inverse Relationship between NYC AirBnB Booking Count and NYC Airplane Fare in 2022 per Months

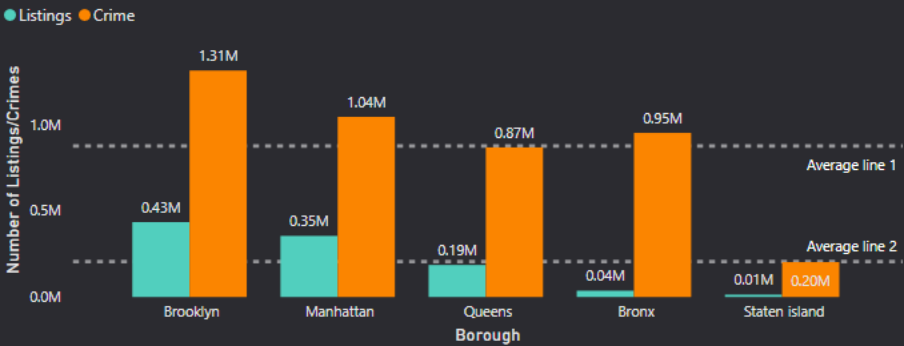


Seasonality Trend Insights

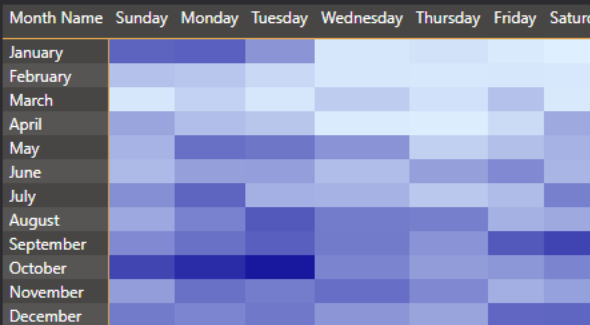
SEASONAL MONTHLY TRENDS & NYC AIR TRAVEL PRICES

- 2020 - Height of Covid lockdown so doesn't trend upward with the rest of the years in airbnb bookings
- Fall > = Summer > Spring > Winter is a trend for all years for airbnb bookings except for 2020 most likely due to covid lockdown later on in the year making fall and summer months lower in bookings for this year.
- As plane fare to NYC goes up in 2022, we see the number of bookings go down in NYC and vice versa and plane ticket prices follow a trend of being expensive in spring and get cheaper towards the end of summer into fall so it makes sense the Fall > Summer > Spring > Winter trend is observed in airbnb bookings.
- Unfortunately, no winter months of ticket prices to nyc were found in the dataset

Number of Listings vs. Number of Crimes by Borough



Bookings



Crime

