Data Science For All Women's Summit

Analyzing Eviction and AirBnB Rental Data in SF

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Introduction

San Francisco, California has been enduring a housing crisis, leaving many long time residents homeless. As rent becomes less affordable throughout the city, many have looked for alternatives to traditional leases. In this project, we explore eviction and AirBnB rental data from every neighborhood in SF in an effort to understand how residents are experiencing and coping with the rent crisis. We aim to shine a light on communities most adversely affected and decipher what the data shows about how residents are managing to stay in the city.

Background

Using most recent data from *Insider AirBnB*and *SFData*, we normalized for population density across all San Francisco neighborhoods and looked closely at neighborhoods with the highest rate of evictions and AirBnB rentals.

Goals

- Determine which neighborhoods have highest eviction rates
- Compare AirBnB Rental types amongst all neighborhoods
- Determine if a relationship between evictions and AirBnB rentals exists
- Provide insight on how affordability is changing the renting landscape

Methods

Using eviction data from *SFData* and AirBnB rental data from *Insider AirBnB* we analyzed which parts of San Francisco had the most evictions and AirBnB rentals relative to population. We used statistical packages in Python and various data analysis techniques to determine if there was any relationship between our data sets and extract meaning from our data.

We researched how eviction and displacement has been reported on within San Francisco to determine the relevance of our work within these communities and found that this analysis is extremely important.

Results

We found that **Chinatown** has the most evictions and the most AirBnB listings relative to available housing amongst all San Francisco neighborhoods. However, there are other neighborhoods with no apparent correlation between eviction rates and AirBnB listings.

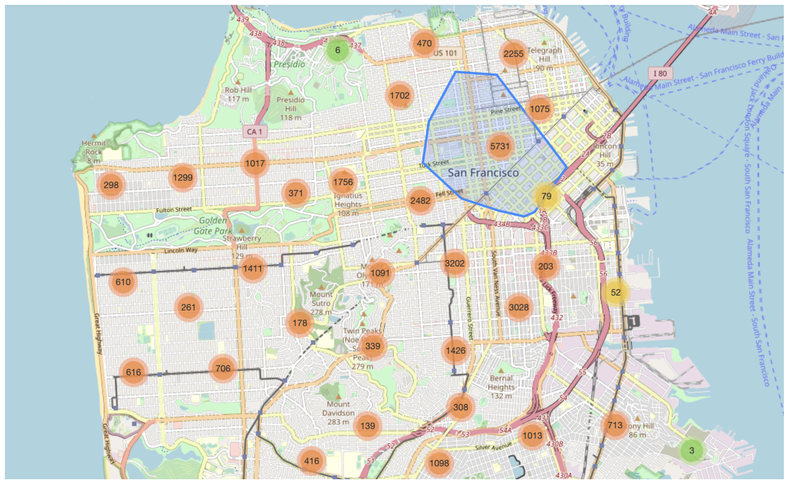


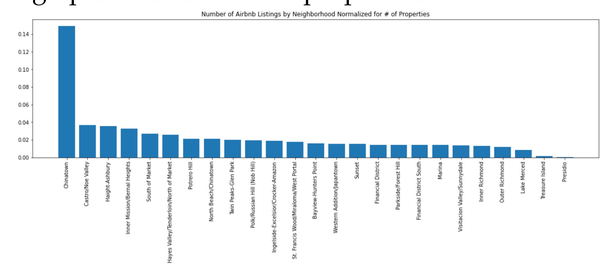
Figure 1: Map of San Francisco Showing Eviction Counts

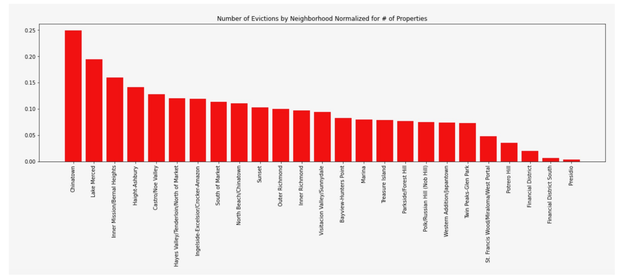
Furthermore, we discovered the following:

- Chinatown is characterized for mainly having listings that are long term stays (30+ nights).
- It seems that if there's a greater variation in Airbnb listing prices that rental prices in that neighborhood are also high. Examples: Castro/Noe Valley, Inner Mission/Bernal Heights.
- Lake Merced, having the most breach evictions and a high number of unapproved subtenant evictions, actually has relatively few Airbnb listings (3rd to last), showing that high eviction rates cannot be only attributed to AirBnB.
- About 46% of Airbnb listings in SF require a 30 minimum nights stay or longer.
- It is possible that renting through AirBnB on a month to month basis is more affordable or convenient for many.

Conclusion

While AirBnB certainly cannot be blamed for the housing crisis in San Francisco, in some neighborhoods such as Chinatown there is a clear correlation between resident displacement and a high presence of AirBnB properties.





Through this work we hope to encourage stakeholders to consider the potential effects our changing rental landscape has on the most vulnerable in our communities.

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