**Project Write-up sections (Robert)**

**What prior research and analysis have been done on this topic?**

Yes, in May 2020, Jessie Owens published an article titled "An Analysis of AirBnB in Washington, DC (Owen, 2020)." Traveler, Jessie, claimed that she finds hotels to be just too impersonal and touristy when looking for lodging. Therefore, when she first discovered and started using AirBnB, it piqued her curiosity greatly.

By avoiding the tourist and commercial portions of a city and staying in a local area, one might experience a place or area more like a native. For travelers all around the world, it has become a well-liked substitute for hostels, hotels, and resorts. She found the motto "belong anywhere" by AirBnB to be enticing since she wanted to experience travel like a native. With the ability to advertise spare rooms, vacant hotel rooms, or entire homes for short-term rentals on the platform, AirBnB has revolutionized the travel industry over the past eleven years.

Jessie looked at data from AirBnB in order to concentrate on a well-known place and spot any tendencies that might be present in a specific urban area. She decided on Washington, DC as a result. In 2009, the AirBnB website began advertising places in Washington, D.C. Since then, the overall number of listings has increased dramatically.

The purpose of Jessie's effort was to uncover intriguing patterns in the data that could be instructive for a traveler, a homeowner (or host), an AirBnB decision-maker, or even a D.C. housing regulator.

Jessie came up with a couple of inquiries that she hoped to address with the information:

* What connections may be drawn between AirBnB data and significant occurrences in the nation's capital over the previous 10 years?
* What elements play a major role in pricing prediction?

From the dataset she discovered, Jessie created these questions!

According to Jessie, the following was the most crucial lesson discovered throughout this study and analytical project:

“Ask the right question. Make it as specific as possible.” (Owens, 2020)

Jessie is future interested in the words that people use most frequently while writing reviews, whether it is possible to segment the reviews, and whether there is a connection between the reviews and the price.

**Information about the dataset we used.**

The website InsideAirBnB.com provided the data that was used for this study (Owens, 2020). Datasets for AirBnB information for cities across the world are kept on this website. The site's creators appear to have intended for it to shed light on AirBnB's "for worse" aspects, particularly the disruption it brings to communities and homes. The site moderators update the datasets on a sporadic basis. Some of the data was gathered between 2013 and the present.

Our data dictionary file, listings.csv, has 6542 rows of data and 75 columns, including the id column (Inside Airbnb, 2023). Version 4.3 of the file listing.csv was released in August 2022. Numerous Fields (id, listing\_url, scrape\_id, neighborhood\_overview, host\_id, etc.), Types (integers, text, bigint, etc.), and Descriptions may be found in the listing.csv file.

**Some statistics for Washington, D.C.:**

*Room Type*

Private, shared, and more recently hotel rooms can all be listed by Airbnb hosts, as well as entire homes and apartments.

A home AirBnB listing could be more like a hotel, disturbing for neighbors, displacing housing, and unlawful depending on the room type and activities.

* Entire home/apartments - 4,964 (75.9%)
* Private rooms - 1,483 (22.7%)
* Shared rooms - 80 (1.2%)
* Hotel rooms - 14 (0.2%)

*Activities*

For the past 12 months, estimates of the number of nights booked and the revenue for each listing have been made using the minimum stay, price, and number of reviews.

Is the house, apartment, or room regularly rented, displacing other housing units and occupants? Does Airbnb revenue favor short-term rentals over long-term housing?

* Average nights booked - 89
* price/night - $212
* Average income - $15,458

*Licenses*

Specific short-term rentals are required to have licenses, according to the law.

How many listings are illegal, making up exemptions, and how many do Airbnb still promote and make money from?

* Unlicensed - 3,206 (49.0%)
* Licensed - 2,291 (35.0%)
* Exempt - 1,044 (16.0%)
* Pending - 0 (0%)

*Listing per Host*

Some hosts on Airbnb have numerous listings.

The same apartment's individual rooms may be listed, as well as other flats or homes that are available in their entirety.

In addition to being in violation of most short-term rental legislation intended to safeguard residential dwellings, hosts with several postings are more likely to be operating a business and are unlikely to be residing in the property.

* Single listings - 2,701 (41.3%)
* Multi-listings - 3,840 (58.7%)

*Top Hosts*

| Host Name | #Entire home/apts | #Private rooms | #Shared rooms | #Hotel Rooms | #Listings |
| --- | --- | --- | --- | --- | --- |
| Blueground | 217 | 0 | 0 | 0 | 217 |
| Team | 173 | 11 | 5 | 1 | 190 |
| June | 12 | 166 | 0 | 0 | 178 |
| Stay Attache | 99 | 0 | 0 | 0 | 99 |
| Home Sweet City | 95 | 0 | 0 | 0 | 95 |

**References**

Inside Airbnb. <http://insideairbnb.com/washington-dc/>

Owens, J. (2020). An Analysis of AirBnB in Washington, DC. <https://medium.com/@jessie.owens2/an-analysis-of-airbnb-in-washington-dc-8013cfef7379>