A study of Amsterdam Airbnb rentals

Business Problem

Amsterdam is the capital and most populous city of Netherlands. Colloquially referred to as the "Venice of the North", attributed by the large number of canals which form a UNESCO World Heritage Site, it is also home to numerous tourist attractions. As a result, it is one of the most visited places in Europe, receiving more than 4.63 million international visitors annually. This results in a demand for places for a short term stay.

Airbnb, Inc. is an online marketplace for arranging or offering lodging, primarily homestays, or tourism experiences. The company does not own any of the real estate listings, nor does it host events; it acts as a broker, receiving commissions from each booking.

We will examine available data to answer these questions:

- Which part of the city has the highest price of rentals?
- Which areas have the highest number of rentals?
- What are the factors that drive the listing price?
- What are the factors that drive the popularity of a vacation home?
- When are more airbnbs likely to be available?

The answers should be beneficial to anyone looking to host a short term vacation rental in Amsterdam by telling them which are the most desirable places to put up listings. Any traveler traveling to the city should also be able to make an informed decision about where to stay based on their budget and interests.

Data

The data for this project has been sourced from mainly 2 sources:

- Publicly available AirBnb listing data that includes:
    1. Information and metrics for listings in Amsterdam
    2. Detailed Calendar Data for listings in Amsterdam
    3. GeoJSON file of neighbourhoods of the city
- Foursquare API
    1. Venue Categories - Hierarchical list of categories applied to venues
    2. Venue Search - List of venues near the current location

All sources for data and other information have been mentioned in the Reference section.

References

https://en.wikipedia.org

https://www.airbnb.com/

http://insideairbnb.com/

https://matplotlib.org/3.2.1/api/pyplot_summary.html

https://pandas.pydata.org/docs/reference/index.html

https://python-visualization.github.io/folium/

https://developer.foursquare.com/docs/places-api/