AIRBNB PRICE PREDICTION FOR PROPERTY OWNER

RATIONAL STATEMENT

Airbnb is a commercial center, the sum a host can charge on a daily premise is firmly connected to the elements of the marketplace. Valuing an investment property on Airbnb is a difficult undertaking for the proprietor as it decides the quantity of clients for the property. One test that Airbnb has faced is deciding the ideal lease cost. Leaseholders are given a decent determination of postings and can channel by measures like value, number of rooms, room type and other conditions. In addition to this, the expenses to leaseholders and neighborhood probably do not surpass the advantages to travelers and landowners, by which sometimes hosts usually faces lot of problems in renting out their property and faces loss in the business. The hosts do not know about the actual or estimated price to rent out the property which in return results out the extreme loss or extreme benefits to them.

PROBLEM

Hosts wanted to rent out their property on the Airbnb on nightly basis, but being new in the field, they are unaware of the market value of the property. As a result, they would set the price of the property as higher or least. When the price set is high in comparison to market value, he would not get any customers for renting out his property. While, on the contrary, when he will set the least price of the property, more customers would be attracted to rent out his property, but in return he will face the problem in making profits from the property.

In order to resolve this problem, the identified proposed solution is designing a machine learning model to predict the price of the property. This tool will help the host to determine the good price of the property while renting out by which he/she can make profits by attracting more customers.

DATA REQUIREMENTS

The main data requirements to solve this problem are as following:

- TYPE OF ROOM: While renting out the property, the type of room is also considered by the tenant. For example, the rent for the private room will be higher as compared to the rent of renting a shared room or renting a full house.

- PRICE OF ROOM: Depending upon the type of room available, the price of the room will also vary.

- NUMBER OF STAYING DAYS: The stay of the customer who will rent out the place for how many days is also the requirement of the data. For example: the price of the property for one-night stay will be different from the price of four-night stays.

- REVIEWS: This is also the main requirement in booking or renting a property. The reviews are mostly rated as 5-star or less depending upon the experience customers had during their stay.

- LOCATION: The price of the property is also dependent upon the location where it is located. For example: the price of the property in the countryside area with Lake view will charge different amount of money as compared to the amount charged for the property which is in the city or main Downtown area.

- MONTH: In which month, the booking has been done by the customer is also helping the host to decide the amount to charge from him or her. For example: the price of property will be different near New Year or Christmas as compared to renting out the property in a normal month.

- DAY OF WEEK: This is also having some impact on deciding the amount of money to charge from the customer. It will depend upon either it is booked on the regular weekday or on weekends.

- PLACES NEARBY: The nearby places to explore by the customer are also helping the host to decide the rent of the property. For example: The price of Airbnb will be different in the Niagara Falls as compared to booking of the Airbnb in the Toronto region.

- CANCELLATION FEE: Sometimes some of the Airbnb's booking charges some amount of cancellation fee from the customer. This factor is also having impact on the booking.

- PARKING: The availability of the parking space to park the car with full safety and securely is also concerned by the customer while making reservation for Airbnb.

DATA SOURCE

Data sources to solve this problem will be obtained from the official Airbnb website which includes spreadsheets of data.

http://insideairbnb.com/get-the-data.html

The data source will consist of three tables namely listing, reviews and calendar.

- Listing file consist information of previous bookings.
- Reviews file will consist list of reviews.
- Calendar file will contain information of booking on the day of the year.

DATA ASSUMPTIONS

- It has been assumed that the booking of the property will be higher during the December month near Christmas and New Year, by which the price for renting the property has been set at a higher value in comparison to the normal booking price of the property.

- It has been assumed that the price of the property will be least in the off season such as in February or March months.

- It has been assumed that the reviews for the property will always be above 3 starts out of 5-star rating by which the host will have enough bookings for the property.

LIMITATIONS

The limited booking of the property because of the reason that might the customer has been frustrated from personal or from office work, by which he gave bad reviews or rating to the property and resulted in less booking and host will face the loss in making profits.

TEST PROCESS

I will part the data into three classifications i.e. training dataset, validation dataset and test dataset. The model will be trained using training dataset and then evaluate using validation data. Based on accuracy, I will retrain the model until I get an acceptable accuracy of 90%.

SUBMITTED BY:

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