Case Study Project - Property Rentals

Company Background

Inn the Neighborhood is an online platform that allows people to rent out their properties for short stays. At the moment, only 2% of people who come to the site interested in renting out their homes start to use it.

Problem statement

The product manager would like to increase the customers. They want to develop an application to help people estimate how much they could earn renting out their living space. They hope that this would make people more likely to sign up.

Success criteria

They want to avoid estimating prices that are more than 25 dollars off of the actual price, as this may discourage people.

Analysing Dataset

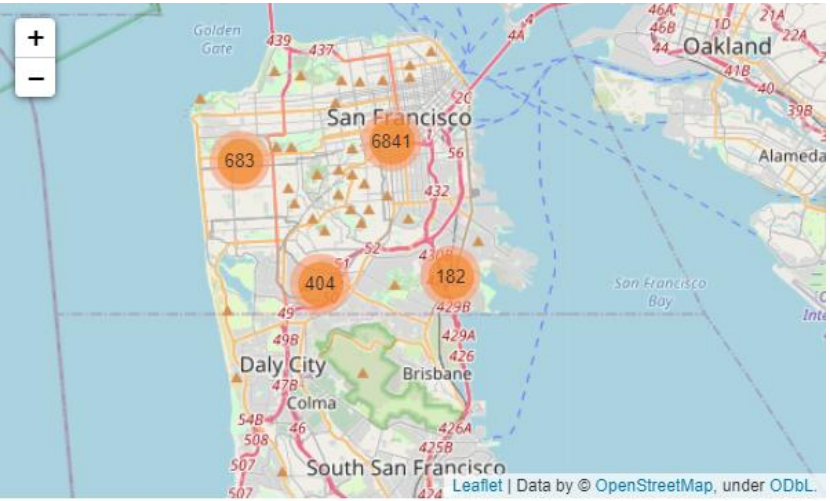
The Dataset include **9** columns. 8111 records .

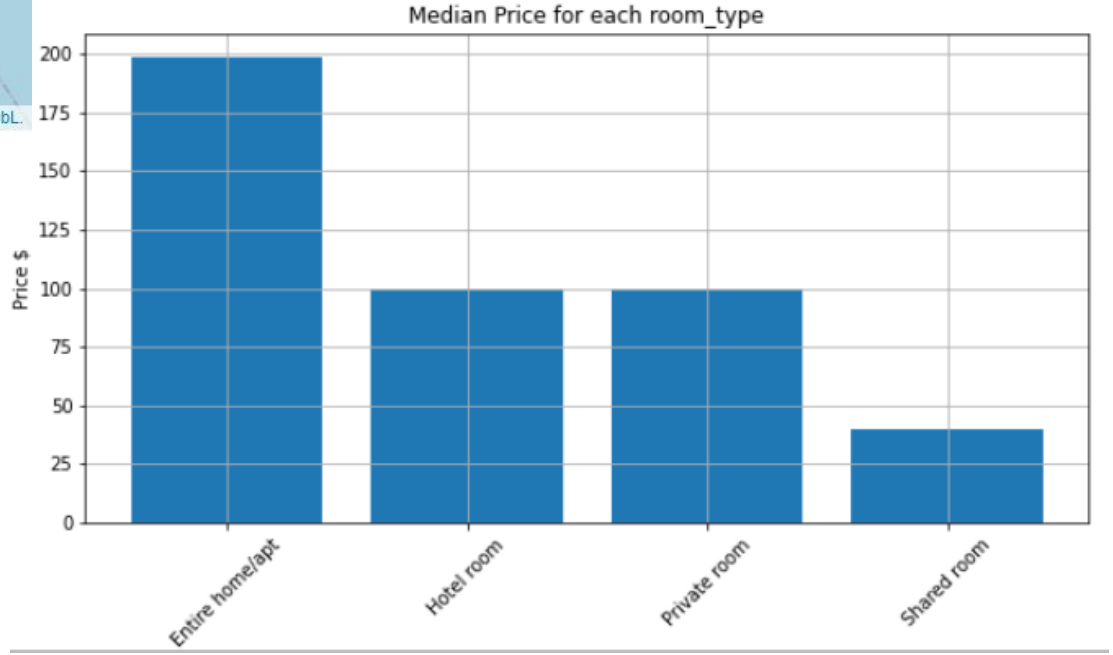
Price is our Target feature. While rest **8** columns are our input feature.

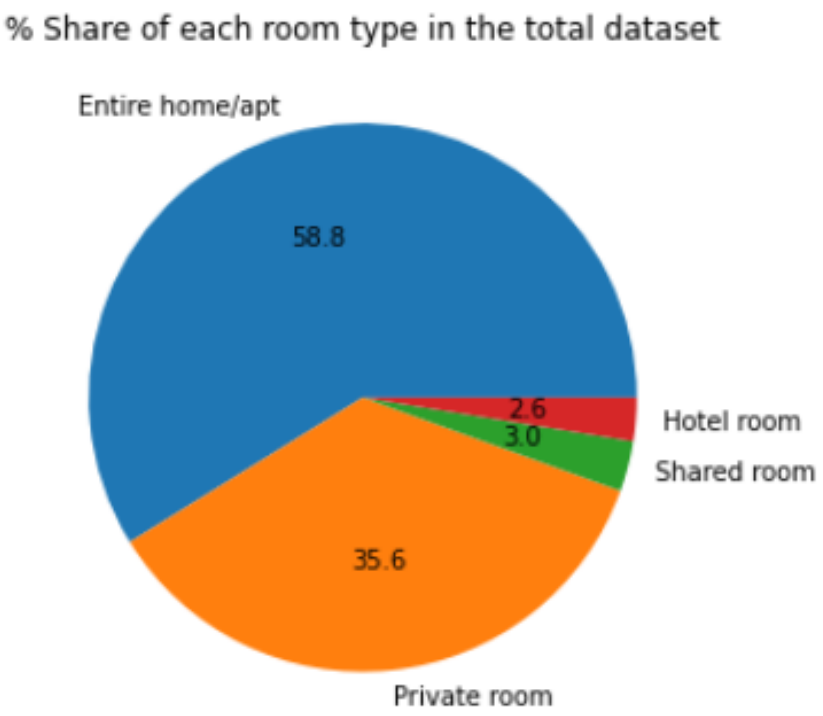
Column Name	Details
id	Numeric, the unique identification number of the property
latitude	Numeric, the latitude of the property
longitude	Numeric, the longitude of the property
property_type	Character, the type of property (e.g., apartment, house, etc)
room_type	Character, the type of room (e.g., private room, entire home, etc)
bathrooms	Numeric, the number of bathrooms
bedrooms	Numeric, the number of bedrooms
minimum_nights	Numeric, the minimum number of nights someone can book
price	Character, the dollars per night charged

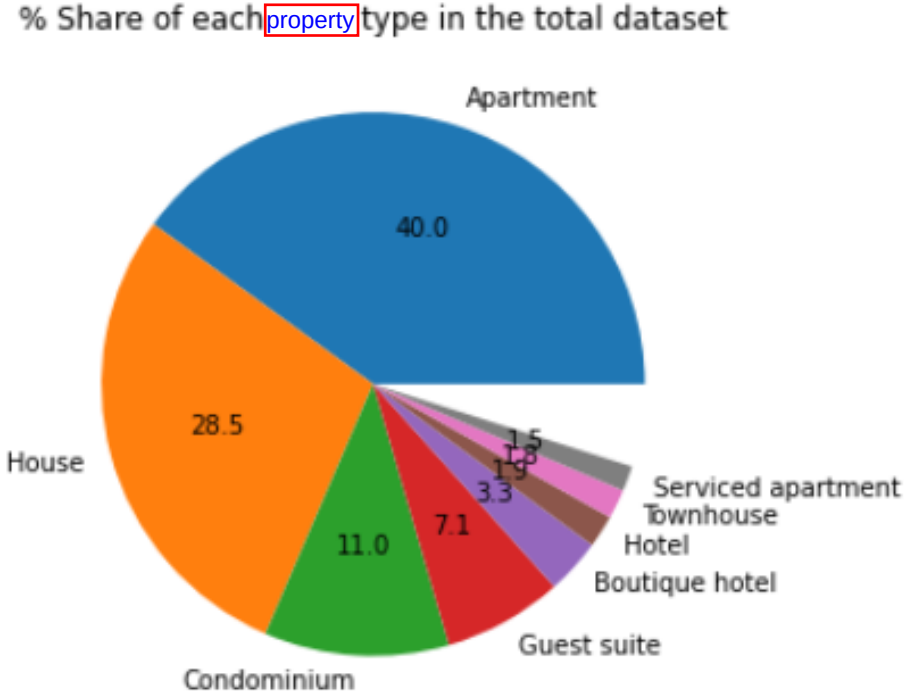
Findings from the dataset.

1) The dataset is for properties located in San Francisco.
2) There are 4 distinct room types to which the properties were grouped. This includes: Entire home or apartments (58.8 % of properties) with a median price of $ 198
3) Hotel rooms (2.6 % of properties) with a median price of $ 100
4) Private rooms (35.6 % of properties) with a median price of $ 100 as well
5) Shared rooms (3 % of properties) with a median price of $ 40
6) There are 26 distinct properties types to which. This constituted:
7) Apartments make up 40% of all properties, houses make up 29%, and condominiums account for 11% of all properties. In this case, the median nightly rate is 153,130, and $200, respectively.
8) At $20, the Camper/RV is the least median expensive property kind, while the Resort is the most expensive.


Golden Gate
Oakland
San Francisco
Alameda
683
6841
404
182
San Francisco Bay
Daly City
Brisbane
Colma
South San Francisco
Leaflet | Data by © OpenStreetMap, under ODbL.


Median Price for each room_type
Price $
200
175
150
125
100
75
50
25
0
Entire home/apt
Hotel room
Private room
Shared room


% Share of each room type in the total dataset
Entire home/apt
58.8
2.6
3.0
Hotel room
Shared room
35.6
Private room


% Share of each property type in the total dataset
Apartment
40.0
House
28.5
Condominium
11.0
Guest suite
7.1
Boutique hotel
3.3
Hotel
1.9
Townhouse
Serviced apartment

$91

Is the average amount with which the estimated rent price that the model predicts differs from the actual rent prices

Recommendations

There are 8111 properties which are divided in to 26 property types however only 1 dataset exists for Camper/RV ,In-law,Dome house,Hut each.

Also there is weak correlation between input features and price.Therefore there is the need to add better quantifiable predictors in order to increase the accuracy of the suggested model and reduce the error.

Thanks!