

# Data Analysis Report

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## 1 Abstract

The key finding was that the type of property that brought in the most revenue on average was a 2 bedroom house.

## 2 Introduction

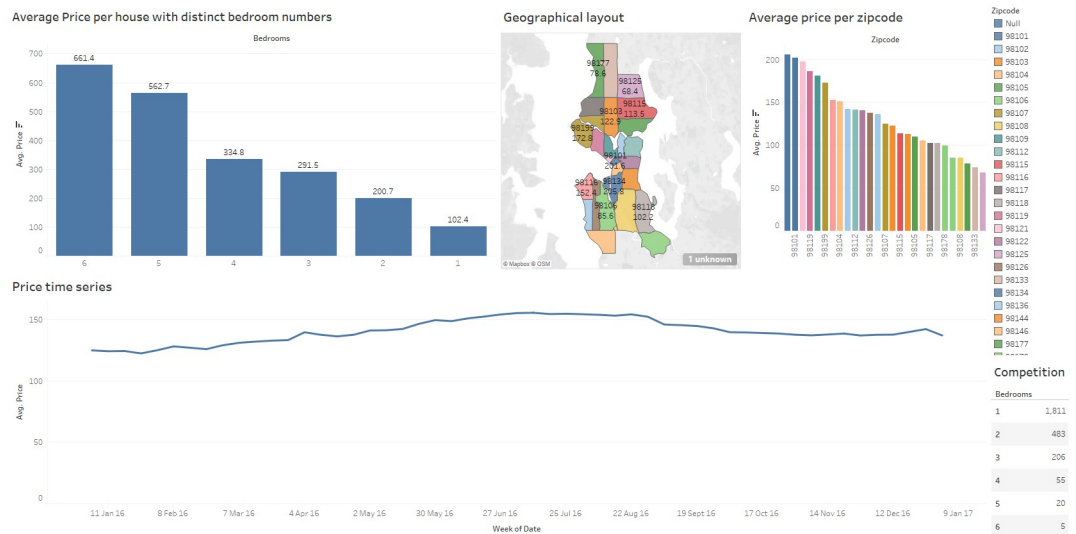
The hypothetical business analysis here being discussed is about giving consultation to my friend who wants to open an Airbnb in the state of Washington, U.S. so as to generate a source of income i.e the analysis was conducted with maximising profit in mind. The analysis is significant as it involves making investment - both financial and time, and we would always like our investment to be an asset instead of a liability. The scope of this analysis is limited to a small area in the state of Washington.

## 3 Methodology and Analysis

The source of data used here is the Kaggle dataset which is open source. The tool used to analyse the dataset was Tableau(Public edition). As there were three different spreadsheets in the single excel file, the data had to be merged together coherently to make a proper analysis. For this the id of every single house was used as a common point to merge the two spreadsheets together to get an aggregated data. Also another thing to note is that only such data were chosen which had house id present in both the spreadsheet(using inner join).

### 3.1 Analysis

The analysis of the dataset is as shown below:



- Firstly, I wanted to see which zipcodes brought in the highest revenue on average in US Dollars. So I created a bar graph of 'average price per zipcode' chart where the y-axis counted the average price and the x-axis had the distinct zipcodes. And upon plotting, zipcode numbered 98134 had the highest revenue at 205.8 USD/day.
- So to investigate further, I made a geographical plot of the zipcodes in the 'geographical layout' chart and the above finding was confirmed.
- I then wanted to analyse the trend of the historical average prices of the competitors, so I plotted the price as a time series on a weekly basis for a year from January to December. Upon plotting, there were two main findings. First, the price peaked at two times of the year - one in July indicating the summer vacations and the other in December indicating the Christmas holiday season.
- I then wanted to see how many bedroom per house was the most profitable. So I created the 'Average price per house with distinct bedroom numbers' chart. The bar graph had the average prices in US Dollars on the y-axis and number of bedrooms per house on the x-axis. And it showed that houses with 6 bedrooms raked in the highest revenue on average at 661.4 USD/day.
- Upon seeing that a 6 bedroom house was the most profitable, I wanted to see the competition in the area. So I created a table of houses with x number of bedrooms and their count in the plot labelled 'Competition'. And upon inspection, there were only 5 houses with 6 bedrooms.

## 4 Recommendation

As previously stated, the analysis was conducted with profit maximisation in mind as my friend was adept at large financial investments. So with this data available, it would be recommended that a 6 bedroom be bought in the area with zipcode 98134 and during the summer and Christmas holidays, the house be listed on Airbnb to create a stream of income from this investment.