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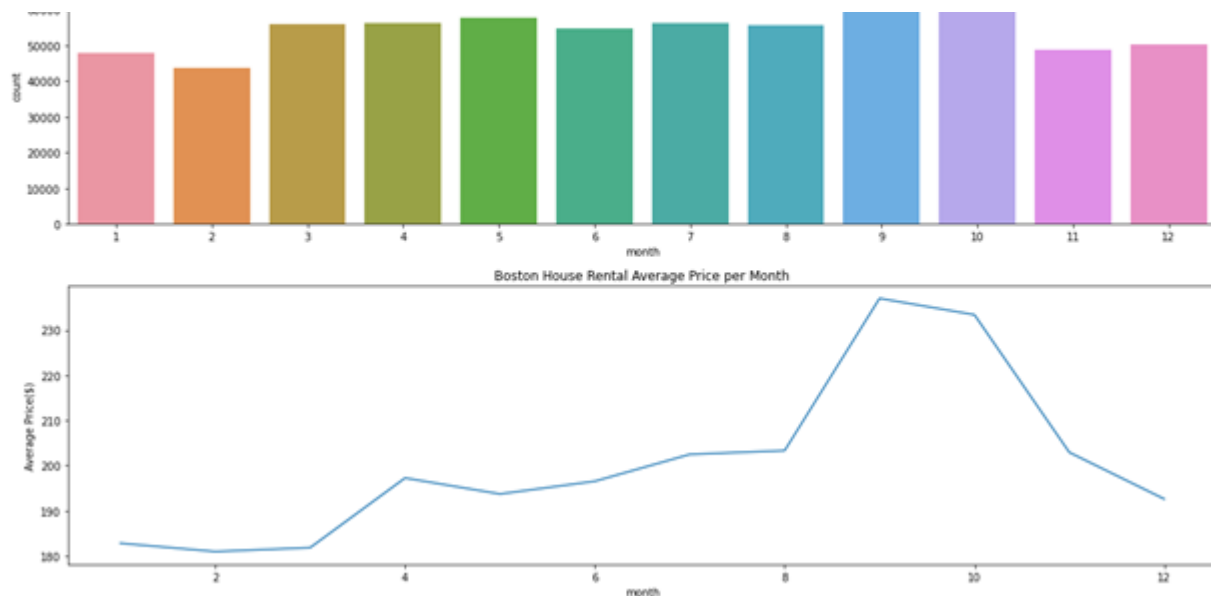
Boston House Rental Price: The Analysis Based on Airbnb Data

B**Bokai Xu** Mar 24 · 3 min read

As a graduate student working at Brandeis University, Waltham, I am always haunted by the high house rental price. Recently a friend of mine visited me and we spent \$500 living in the Airbnb in Boston. While visiting the freedom trail and having nice lobsters with him, I was wondering what influence the price of house rental around Boston? Hence I used the data from Kaggle([Boston Airbnb Open Data](#) | [Kaggle](#)) and run a simple analysis.

Question1: When is the most popular time to visit Boston?





The reservation data from Airbnb was used to make a plot. From this plot it is clearly to see the most popular season to visit Boston is September. This make sense since the weather is nice and people could visit White Mountain at the same time. It is also clear to see the most unpopular time to visit Boston is February since it is the coldest time in the year. At that time the house rental price and number of reservations are the lowest among months.

Question2: What influence the price of house rental around Boston area?



From the plots above it is not hard to see the size of the house influence the price. Clearly the bigger house, which means it has more bedrooms, beds and can accommodate more guests, the higher the price to be rent. It is interesting that the review score of the house does not influence the price of rental. Maybe this means the amount of houses around boston are not enough and even the rating of a house is low still the owner could label a high price for it.



From the plot above it is also easy to see the position influences the price a lot. The more the house is close to downtown, the higher of the price.

Question3: Is it possible to build a model to predict the price of house rental around Boston area?





The answer is YES!!!

A simple neural network was used to build a model to predict the price of house rental in Boston area. Since the amount of data set is relatively small (~2000 used in training and ~1000 used in testing), the model does not predict the price very well. With large amount of data, maybe it will perform better. Or we should use a linear regression instead.

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