

A TIME SERIES PREDICTIVE MODEL WITH A RECOMMENDER SYSTEM FOR AIRBNB

CONTRIBUTORS

1. MERCY ONDUSO
2. NURULAIN MAALIM
3. AMOS KIBET
4. BETH MITHAMO



INSIDE AIRBNB

Revolutionize your Airbnb Business

Boost your Business by making the best out of your existing data .

Presented By
Group 2



- What is Airbnb?
- How does it Work?
- What is its Impact to the Hospitality Industry?

Airbnb is an online platform that allows individuals to rent out their properties or spare rooms to travelers looking for accommodations

Airbnb works by allowing hosts to list their properties on the platform, including detailed information such as photos, amenities, and pricing.

It has disrupted the traditional hotel industry by offering travelers a more affordable and personalized alternative to traditional hotels.



Data Sources

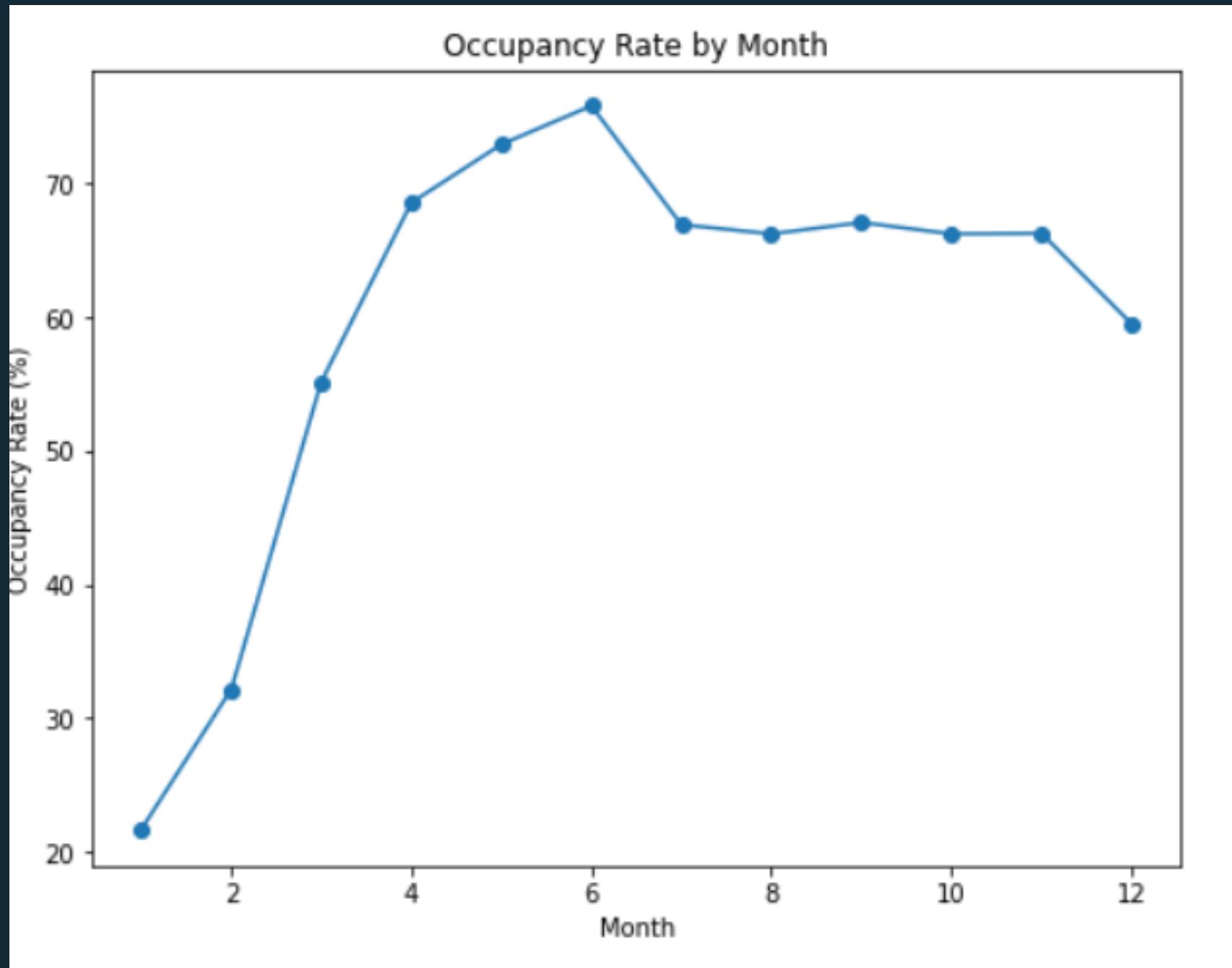
The data from the Inside Airbnb Platform is uploaded in daily frequencies. The data was cleaned and preprocessed using One Hot Encoding, Replacing and dropping missing values, and creating new variables using Get dummies



What does the Time Series Model Do?

It gives better insights to the stakeholders, who in turn give users better analysis. The time series does a prediction of the possible prices that might be during a certain time of the year. It also gives the stakeholders insights of when they can remove their property in the Airbnb Listing for renovations and modification

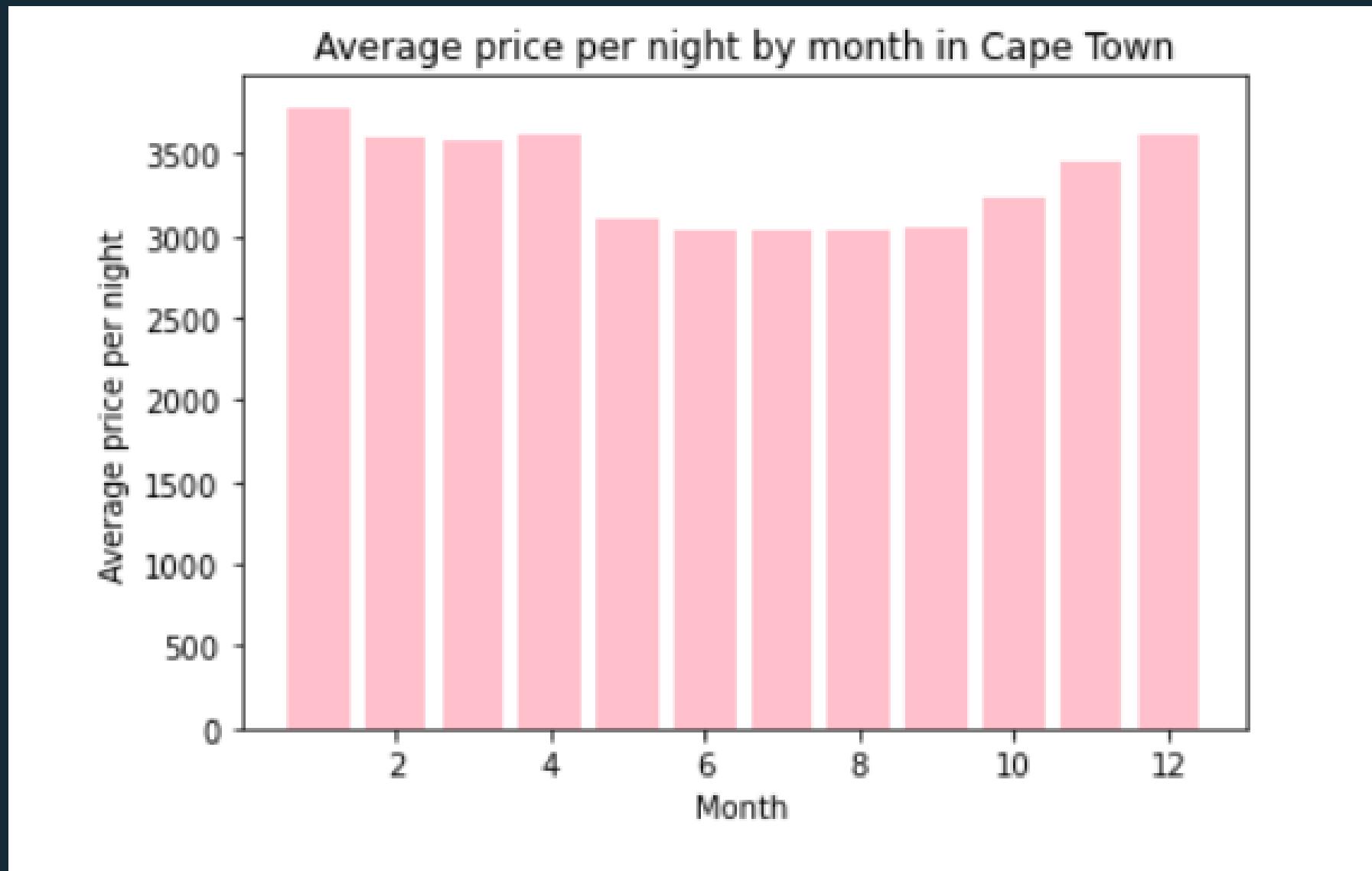
ANALYSIS OF TIME SERIES MODEL



- Each month is represented by a number. We see that the occupancy rate increases during the months of April-August.
- During the high season , stakeholders who wish to list more of their property to the airbn platform are encouraged to do so.

Shows how the occupancy rate of the listings change by month

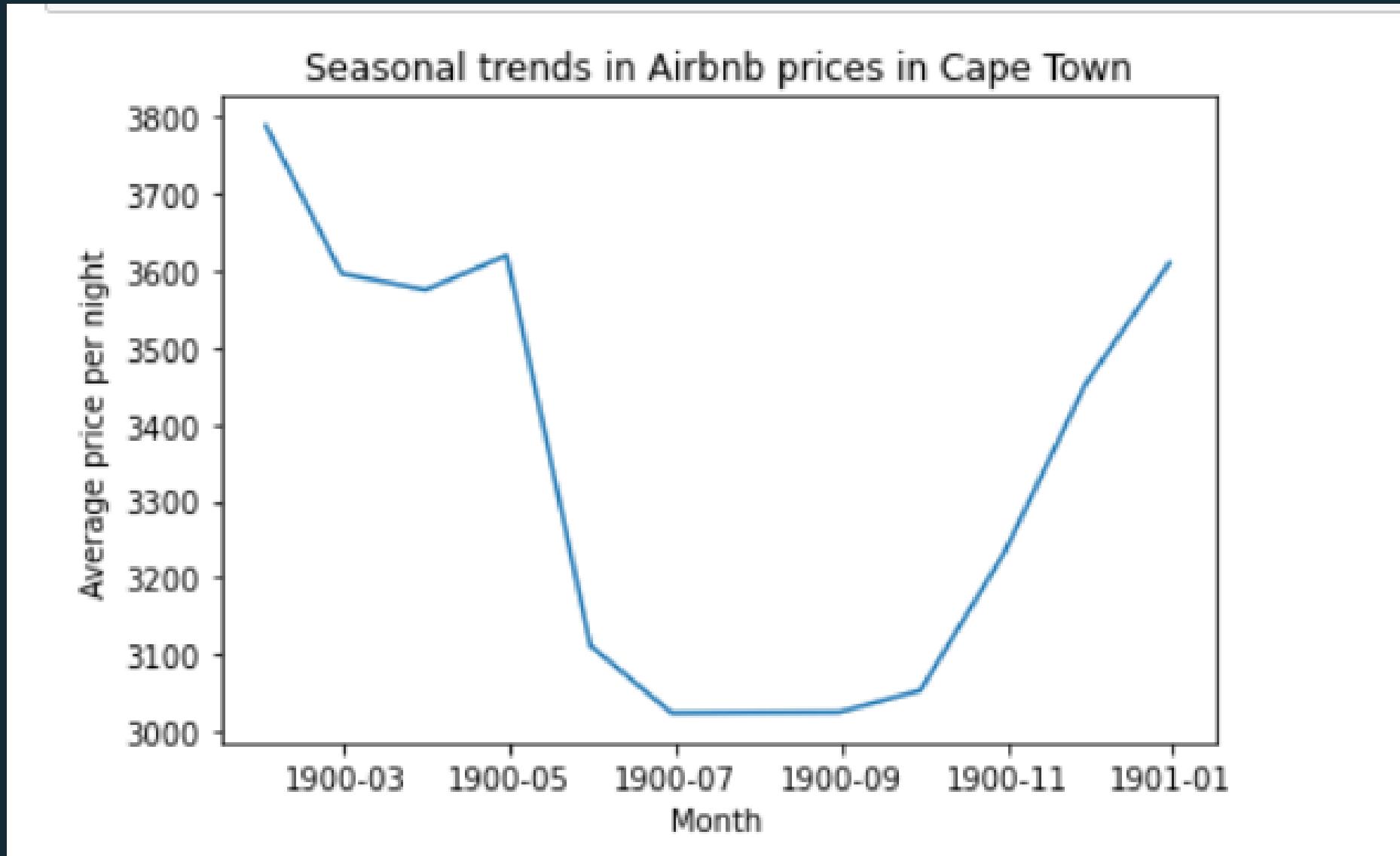
ANALYSIS OF TIME SERIES MODEL



- **From this plot, we can advise the people who are planning to visit Cape Town with a low budget to utilize the low seasons of the business**

Shows the Average Prices per month of the various listings

ANALYSIS OF TIME SERIES MODEL



- A stakeholder who aims at attracting customers can utilize the high season with offers and discounts

The graph shows the seasonality of prices across the year



What does the Recommender System do?

Reduces diversification of recommendations to the user

- It provides the stakeholders with cluster of users with similar preferences and tastes based on their past behaviors and interactions in the Airbnb platform.

Analysis of the Recommender System

The recommender system groups users with similar preferences and tastes. To get similar users, we input a particular listing id into the predictive model and the model gives us an output, which is a list of similar users using their unique identifiers.





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Thank you for your
time.

