Hotel Booking

Milestone 1: Introduction and Business Analysis

ITC 6000

Prepared by: Heejae Roh
Presented to: Professor, Venkata Duvvuri

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INTRODUCTION

I often travel with my family, so I prefer to book hotels. Booking prices varied in different time and situation. There were many factors that were difficult to know until I literally get the hotel. In this project, business goal of our group is predicting hotel booking demand and cancellations. Expected use-case are for hotel owners to predict demand and make price strategy. Use-case for customers would be to predict hotel price according to different season. One of the scenarios of hotel owners' use-case is to make price strategy for each season. One of the scenarios for customers is to make easier to book hotel in peak season. Our group is going to use the Oracle Cloud to upload our dataset and use the Autonomous Database.

The application's cost model is expose travel-related sites to the users and receive advertising revenue from advertiser. Later, I plan to make a subscription service for hotel owners to enhance their exposure and receive commissions from the hotel booking. This could be used by booking sites like hotels.com, booking.com, etc.

Business challenge:

1. Competitive market with pioneers
2. Difficulty to get big data comparing with other competitors
3. Hard to accurately predicting hotel supply and consumer demand with human errors

Cost model (free to paid)**:**

1. Start, free uses with watching advertisement to expand
2. Later, a subscription service for hotel owners to enhance their exposure and receive commissions from the hotel
3. Lastly, a premium service for heavy users to get more enhanced deals and coupons

BUSINESS ANALYSIS

Business goal:

1. Predict hotel booking demand and cancellations
2. Estimates hotel reservations on a monthly basis
3. Predicts the probability of canceling based on the information about options selected by the booker
4. Accept and confirm reservations
5. Optimization of hotel revenue with anlysis

Business rules and logics:

1. A customer can make one or many reservations
2. Hotel contains several rooms and staff
3. Each staff can look into multiple reservations
4. One reservation can involve many rooms
5. Hotel can be located in multiple locations
6. Many reservations can be handled by a single agent/company

PERSONAS

[1] Hotel owner who operates a small hotel near the coast. There is a big difference between peak season and off-peak season. The number of rooms is less than 20. During peak season, the room is almost full, but the hotel utilization rate is 90% due to cancellation. We want to bring this closer to 100%.

[2] Hotel owner who operates large hotels with over 100 rooms. The biggest concern is to keep the operating rate of the hotel constant. We want to accurately predict customer demand and set up a discount strategy in detail.

[3] Traveler who travels alone on the fly often make reservations on the same day or the night before. More than 30 hotel reservations per year, higher than the US average of 25 (Steve, 2022).

[4] Customer traveling with their families, with one small child. It is important that the environment is suitable for children.

Who, Why and How:

1. Hotel owners, get more revenue, and apply to be more specific in price contact during peak season and sell their hotels to the maximum
2. Customers, make hotel reservations cheaper & especially helpful for customers who want to use it during the off-peak season. And use applications and check price variation.

Incorporate feedback (from classmates)**:**

1. “I prefer the probability of the cancellations to predicting hotel booking demand.” (Junchen)
2. “If this canceled room is not used, it will be a loss to the hotel. So it's important to anticipate cancellations” (Yuchen)
   - I think it’s better to predict the cancellations, considering pioneers.
3. “I wonder about the difference in the reservation and cancellation between the official website and the three-party websites because there are so many ways to book hotels.” (Kuan-Yu)
   - After gathering enough big data, we will try to apply this system when we update app.

REFERENCE

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