

Hotel Demand Forecasting for better planning & increased profitability

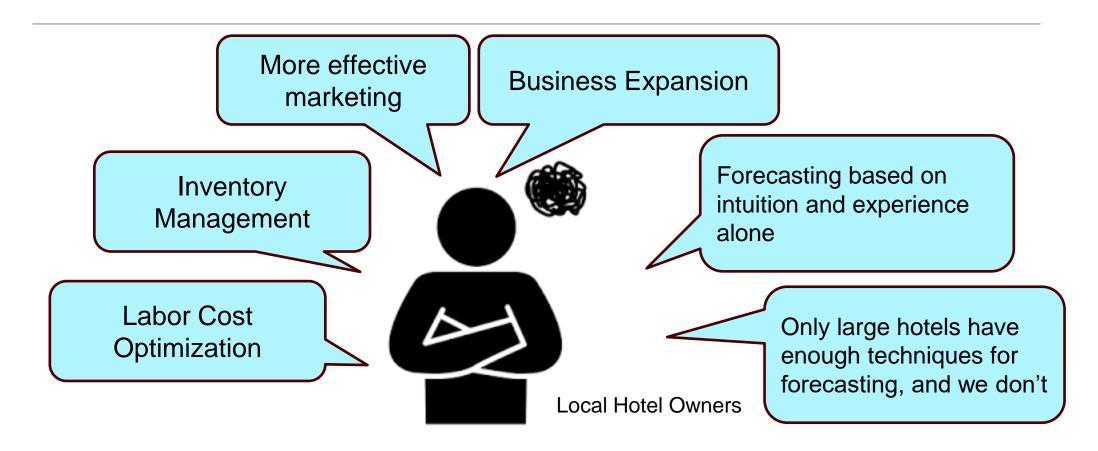
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Question: Are local hotel owners satisfied with business efficiency?



We can solve the concerns!!

Use Case Overview

Solution: Local Hotel Reservation Forecasting

What:

Short (next month) and Long (next 12 months) term hotel reservation forecast

To Whom:

Small to Mid local hotel owners (Who are both buyer and user)

Problem:

Accurate forecasting is essential to improve hotel business efficiency but is difficult for small/mid-hotel owners who don't have its capability.

How:

Using the Univariate Time Series Forecasting.

Goal (Jobs to be Done):

- They can see the forecasting of the number of reservations accurately. [Functional]
- They can easily see a trend and seasonality through graphs and understand their interpretation. [Functional / Emotional]
- They can use their own reservation logs and create their hotel-oriented forecasting. [Functional]

Who are the Buyer?

Target (Persona):

A local hotel owner in Los Cabos* who want to improve their business efficiency by using accurate future reservation forecasting

What do they want to improve?

- 1. <u>Inventory Management [Short term]</u>
 - Meals, Linens
 - Any other supplies
- 2. Resource Planning [Both]
 - Shift Scheduling
 - Staff Hiring
- 3. Business strategy [Long term]
 - Profit forecasting
 - Marketing with causal analysis

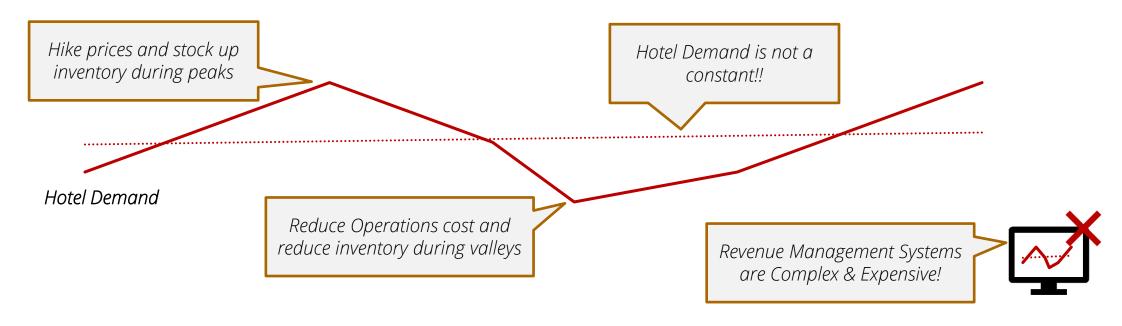


*The trend is different among countries and areas, so we start from a specific area but aim to expand it to other area's hotel owners by only replacing data.

Discovery Hypothesis



...I wish I know how many guests will stay at my hotel next month, so I can better serve them and manage my costs?...I can't afford expensive software and hire dedicated people just for this!



Our specifically designed demand forecasting solution will enable budget hotel owners to forecast demand in a cost-effective manner

So why our solution?



Designed specifically for the Budget Hotels



Maximizes Profitability



Increases Adaptability to Demands peaks & valleys









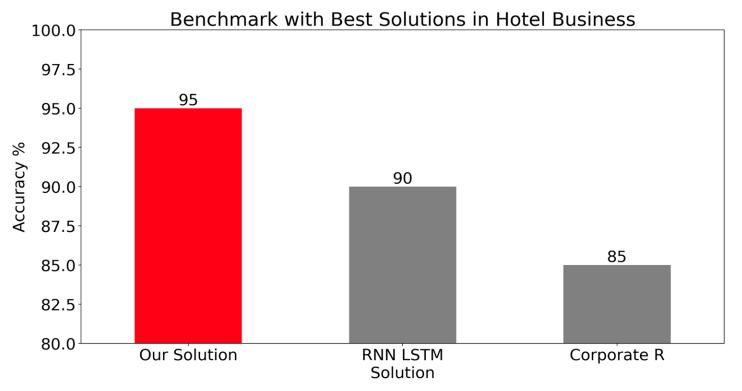
⊕ ⊕ + ⊕ Ø**≥** ⊘ Group Project Team 1 Alternative Proposal - Jupyter Notebook Hotel_Forecast_App · Streamlit **Hotel Reservations Forecasting Hotel Reservations Forecasting App** Forecast hotel reservations and manage Select what you would like to do: resources. 3. Select forecast Basic Stats for Hotel Occupancy Tourists Stats for 3 Most Important Nationalit es toolset Instructions: Hotel Occupancy Forecast 1) Select your preferences Smart Marketing Campaign 2) Import your data 3) Select an analytics toolset 4) Visualize your results Continue **Forecast Complete Hotel Location:** Los Cabos Hotel Occupancy Forecast: Forecast Period: Long Term (12 Months) 4. Visualize your Pandemic: results Number of Employees at 100% of Occupancy Choose a File Drag and drop file here Date Limit 200MB per file • CSV, TXT gie Mellon University Recomended Number of Employees per Month Browse files

1. Select forecast Options

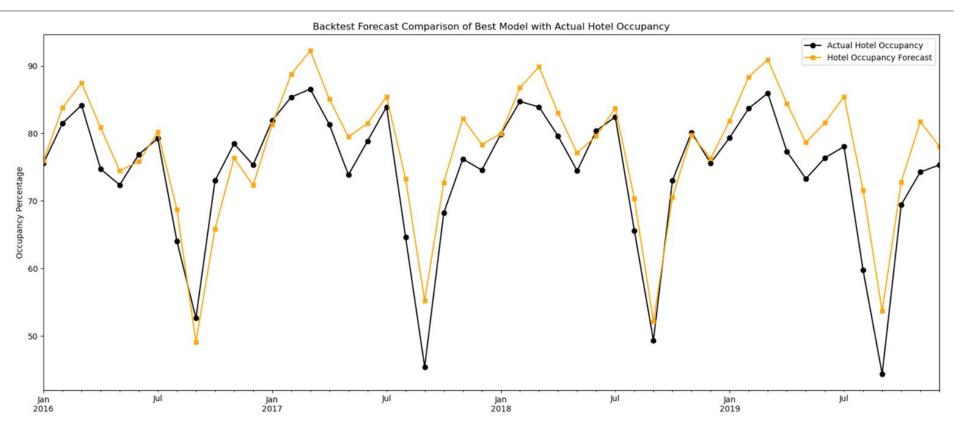
2. Import your hotel occupancy data

Our Solution

- Our solution analyzes your data and automatically selects the best machine learning algorithm to improve forecast accuracy.



Our Solution



Accurate enough? Here's a good comparison between real hotel occupancy data and forecast data from our solution. As you can see, our forecasts are really close to actual data. (Dataset Source: <u>Datatur</u>)

Price and its cost efficiency



- The price is \$50,000 without any subscriptions (one-time purchase only)
- We expect most of hotels can reduce at least **5%** of labor costs by accurate forecasting
- Suppose your annual labor costs is \$1,000,000 (20 workers, \$50,000/yr. per person), the annual savings is \$50,000 and the ROI is expected to be at least **100%**.

Option	Pros	Cons	Total Costs in 5 yrs
Our Product	 Reasonable Price Easy to use Secure (No need to share data) 	Need to adjust initially	\$50,000
Revenue Management (SaaS Service)	Multifunctional	 Security risk Expensive running costs (\$40,000 / year) 	\$200,000
External Consultant/ Analyst	Advanced Analysis	 Depends on the person Expensive (\$60,000 / year) 	\$300,000

Market Size and Potential Revenue



Potential customers in the world

200,000



Expected Market Share in 1 year

1 %



Solution Price



1 Year Revenue



50,000 \$



100M \$

