

IDEATION PHASE

BRAINSTORM & IDEA PRIORITIZATION

Date	18-10-2023
Team Id	Team-592499
Project Name	ML Model for Occupancy Rates and Demand in The Hospitality Industry

Team members:

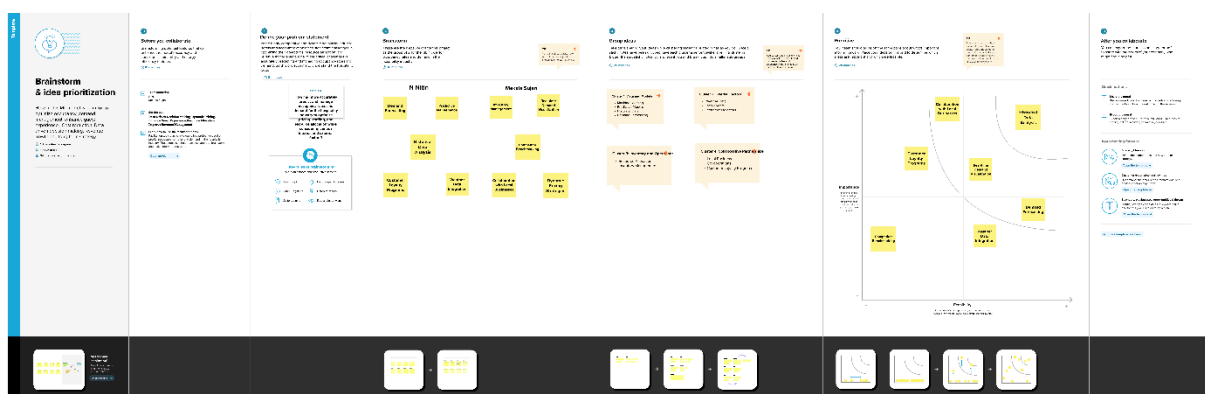
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Now we are going to do the brainstorming for the project which we have chosen that is ML model for occupancy rates and demand in the hospitality industry it is the creative process in which a group generates a potential solutions, suggestions for a specific problem or project.

Brainstorming for ML model for occupancy rates and demand in the hospitality industry:


Here we aim for to optimize occupancy, demand management, enhance guest experience, Cost reduction, Data driven decision making, Revenue growth and long term strategy.



REFERENCE LINK:

<https://app.mural.co/t/sujan9966/m/sujan9966/1697625521858/d46b74987bcff650f99439428ef2d708c618a8b4?sender=u83b2b1f0f29878ddbabe2809>

Step-1: Team Gathering, Collaboration and Select the Problem Statement:



Brainstorm & idea prioritization

Here in this ML model we aim for to optimize occupancy, demand management, enhance guest experience , Cost reduction, Data driven decision making, Revenue growth and long term strategy.

🕒 10 minutes to prepare
🕒 1 hour to collaborate
👤 2-8 people recommended

Before you collaborate

Brainstorming potential features that can enhance the model's accuracy and consider sustainability and energy efficiency features.

🕒 10 minutes

A

Team gathering
N Nitin
Mekala Sujan

B

Set the goal
Data-Driven Decision Making, Dynamic Pricing, Enhance Guest Experience, Resource Allocation, Improve Revenue Management

C

Learn how to use the facilitation tools
Facilitation tools can be invaluable in a project focused on predicting occupancy rates and demand in the hospitality industry. These tools can help teams collaborate, brainstorm, and make informed decisions.

[Open article](#) →

1 Define your problem statement

In the highly competitive and dynamic hospitality industry, hotels and accommodations face significant challenges in optimizing their operations, resource allocation, and revenue management. One of the critical challenges is accurately predicting and managing occupancy rates and demand. So this project aims to understand the hospitality better.

🕒 5 minutes

PROBLEM

How might we accurately predict and manage occupancy rates and demand for the hospitality industry to optimize pricing, staffing, and resource allocation while considering various internal and external factors?

Key rules of brainstorming

To run a smooth and productive session

Stay in topic.

Defer judgment.

Go for volume.

Encourage wild ideas.

Listen to others.

If possible, be visual.

Step-2: Brainstorm, Idea Listing and Grouping:

2 Brainstorm

These are the ideas we got for this project as the group of 2 for the ML model for occupancy rates and demand in the hospitality industry.

🕒 10 minutes

N Nitin

Demand Forecasting

Predictive Maintenance

Historical Data Analysis

Customer Loyalty Programs

Mekala Sujan

Inventory Management

Real-time Demand Visualization

Competitor Benchmarking

Weather Data Integration

Collaboration with Local Businesses

Dynamic Pricing Strategies

TIP You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

3 Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

TIP Add customizable tags to sticky notes to make it easier to find, browse, organize, and categorize important ideas as themes within your mural.

Cluster 1: Data and Models

- Machine Learning
- Predictive Models
- Historical Data
- Demand Forecasting

Cluster 2: External Factors

- Weather Data
- Local Events
- Economic Indicators

Cluster 3: Inventory and Operations

- Resource Allocation
- Inventory Management

Cluster 4: Collaborative Partnerships

- Local Business Collaborations
- Customer Loyalty Programs

Step-3: Idea Prioritization:

4

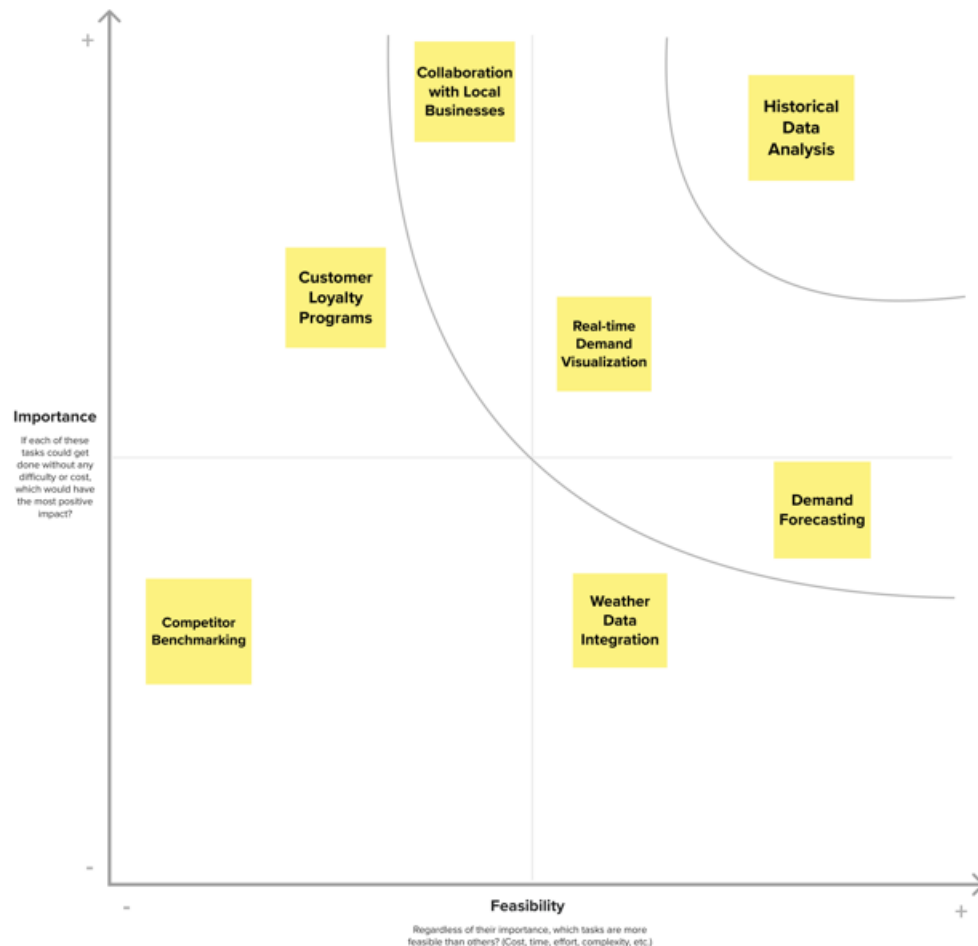
Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

⌚ 20 minutes

TIP

Participants can use their cursors to point at where sticky notes should go on the grid. The facilitator can confirm the spot by using the laser pointer holding the **H key** on the keyboard.



Out of all the ideas provided as a team we have chosen that the Historical data analysis will be the perfect one.

In the context of the machine learning project for predicting occupancy rates and demand in the hospitality industry, historical data analysis plays a critical role. It involves an in-depth examination of past data pertaining to occupancy rates, bookings, cancellations, and various other factors. This analysis not only allows us to understand historical trends and patterns but also helps in identifying the key drivers of demand fluctuations. By scrutinizing historical records, such as check-in/check-out dates, room types, pricing, and guest demographics, we can unveil valuable insights. For instance, we can discern seasonal occupancy variations, the impact of local events and holidays, and the relationship between occupancy and external factors like weather conditions and economic indicators. These insights are fundamental for feature engineering and model training, enabling the machine learning model to make

accurate predictions and data-driven recommendations for optimizing pricing, staffing, and resource allocation.

In conclusion, We decided to do it on the Historical data analysis in any industry with the help of the Machine Learning Model For Occupancy Rates And Demand In The Hospitality Industry we create.

*****THANK YOU*****