



# **How Data Science Can Help Your Hotel Grow**



# What Exactly Is Data Science?

1

Data science = using data to make better business decisions

2

It finds patterns, trends, and insights from your existing data

3

It helps businesses reduce guesswork and grow with confidence

# What Problems Do Hotels Face Today?

Today's hotel business face common challenges:

- Not understanding what customers really feel
- Overbuying or understocking food items
- Not using data to attract or retain customers
- Missing revenue opportunities by keeping static pricing

But these problems can be solved with simple insights from your own data (like reviews, bookings, kitchen records).

# Use Case-1: Understand Customer Feedback from Reviews

## 1 Problem

- “We get reviews on Google and travel sites, but don’t know what people truly feel.”

## 2 Solution

- Summarize all customer reviews to clearly show:
  - What guests love (e.g., food, ambiance)
  - What they dislike (e.g., room service, delay)

## 3 Benefit

- Improve service where needed
- Promote your best strengths
- Increase customer satisfaction



# Use Case 2: Smarter Kitchen Stock Planning



## Problem

- “Sometimes we over-buy vegetables or understock key items – leading to food waste or unhappy guests.”



## Solution

- We can check past patterns (weekdays, weekends, events) to know:
  - How much of each item is needed
  - When to buy more / less



## Benefit

- Reduce food wastage
- Save kitchen cost
- Always have what the guest needs

# Use Case 3: Dynamic Room Pricing

## 1 Problem

- “Room prices remain the same every day — but guest demand changes depending on season, events, and weekdays. We may be losing profit or bookings.”

## 2 Solution

- Set flexible room pricing based on:
  - Festival seasons (Diwali, New Year, etc.)
  - Local events or wedding bookings
  - Weekends vs weekdays [based on past booking trends and seasonal demand]

## 3 Business Benefits

- Increase revenue during high-demand periods
- Fill more rooms by offering discounts on low-demand days
- Stay competitive with nearby hotels offering dynamic pricing

# Use Case 4: Targeted Offers Based on Guest Type



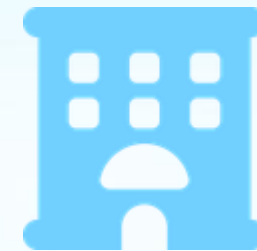
## Problem

- “We don't know which type of customer visits us more – family, business, or others.”



## Solution

- Based on booking patterns and preferences, we can find different types of guests and create personalized offers



## Benefit

- Family guests → Weekend combos
- Business guests → Meeting hall + stay offers
- Bring more repeat customers

# Use Case 5: Optimize Marketing Campaigns Using Guest Data

## Problem

- “We send the same offers to everyone. Some guests respond, most ignore. We don’t know which campaign worked or failed.”

## Solution

- Use past booking and guest data (festivals, weekdays, guest type, location) to:
  - Segment guests based on behavior (e.g., frequent visitors, one-time guests, families, couples)
  - Send personalized offers — like weekend getaways for families, business deals for corporate guests
  - Track response rate of each campaign (email/SMS) to improve next campaign

## Business Impact

- Higher response and booking rates • Less waste of marketing budget • Better customer engagement
- Build loyalty with repeat customers



# Conclusion: Data Science for Smart Hotel Growth



No need to hire a big technical team



No need for heavy investment or complex tools



Even small data like billing, booking, and reviews is enough



One skilled person can extract meaningful insights



Data science helps improve service, reduce waste, and increase revenue

**Thank You**