

# Data Analytics Internship Assignment

## Hostel Pricing Analysis

### Background

You work for a hostel booking platform operating across multiple cities. The management wants to understand what drives pricing variations in their booking data to optimize their pricing strategy.

### Dataset Description

You will receive a file with the following columns:

- **Room type:** 1 = Dorm bed, 2 = Private room
- **Hostel ID:** Unique identifier for each hostel
- **City ID:** City where the hostel is located
- **Total days booked:** Length of stay
- **Booked date: Day of week:** Day when booking was made (1=Sunday, 2=Monday, ... 7=Saturday)
- **Booked date: Day of month:** Date of month when booking was made (1-31)
- **Booked date: Month of year:** Month when booking was made (1-12)
- **Booked days before:** How many days in advance the booking was made (0 = same day)
- **Average per day price:** Price per night

### Key Questions to Answer

#### 1. How does advance booking affect pricing?

- Compare prices for bookings made 0 days before vs x+ days before
- At what point does the price change most dramatically?
- Is this pattern different for dorms vs private rooms?

#### 2. Are there weekly patterns in pricing?

- Which day of the week has the highest average prices?
- Do people who book on weekends pay different prices?

#### 3. What are the seasonal pricing patterns?

- Which months have the highest and lowest average prices?

- How much does price vary across months?

#### **4. Do pricing patterns vary by location?**

- Compare how prices change with advance booking across different cities
- Do all hostels in the same city follow similar seasonal patterns?

#### **5. What's your pricing recommendation?**

Based on your analysis, suggest:

- When should hostels charge premium prices?
- When should they offer discounts?
- One specific pricing rule that could increase revenue

### **Deliverables**

Submit ONE document containing:

1. Your analysis (code/Excel work shown)
2. Key visualizations (3-4 charts maximum)
3. Brief answers to each question
4. Your pricing recommendation (keep it practical and specific)

### **Tips**

- Focus on finding actionable patterns
- Use clear visualizations to support your findings
- Consider creating new variables like "last\_minute" (booked 0-1 days before) or "weekend\_booking" to help your analysis
- Remember that different cities/hostels might have different patterns