Optimizing Revenue Leakage & Profitability in the Hospitality Sector

Introduction

In the competitive and dynamic hospitality industry, hotels and resorts often face unexplained revenue leakages, fluctuating profitability, and underutilized service offerings. These issues can stem from a variety of factors, such as inefficient pricing strategies, low-performing service segments (e.g., spa, room service, event hosting), poor upselling or cross-selling, misaligned customer targeting, or seasonal demand mismanagement. Despite having access to guest behavior data, booking patterns, and service usage metrics, many mid-sized hotel chains lack a systematic approach to extract actionable insights that directly improve their revenue streams and overall business model.

Project Objective

To develop a framework that helps hospitality businesses identify root causes of revenue leakage, propose data-backed product and pricing strategies, and justify them with business logic and forecasting models(like Week-on-Week (WoW) and critical business KPIs like Revenue, RevPAR, Occupancy %, and ADR).

Project Components

1. **Data Analysis Module**
   - Booking trends (weekday vs. weekend, room types)
   - Seasonal occupancy vs. revenue correlation
   - Ancillary service usage (spa, meals, transport, etc.)
   - Customer segmentation based on spending behavior

2. **Root Cause Analysis**
   - Identify why certain rooms or services underperform
   - Analyze cancellation reasons and last-minute discount patterns
   - Assess competitor pricing models and customer reviews

3. Consulting Recommendations
- New pricing and bundling strategies (e.g., couple packages, weekend getaways, corporate stays)
- Product optimization (shutting down/repurposing underperforming services)
- Operational tweaks (housekeeping, dynamic staffing)

4. Business Justification
- ROI and payback time for proposed changes
- Scenario analysis (best case, worst case, most likely)

5. Deliverables
- Dashboard with KPIs (Average Revenue Per Available Room - RevPAR, Occupancy %, Service Revenue Split, etc.)
- Recommendation report with visual justifications
- Optional: Interactive prototype on tools like Power BI/Tableau

Example Use Case

A hotel chain experiences declining profits during the off-season. You use data to show that event-hosting spaces are underbooked and suggest pivoting to co-working spaces during weekdays. You support this with ROI predictions and a breakdown of additional revenue expected.

Dataset

Access the dataset using the following link:
Link

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Resources :
Link