



DEPI – Data Analytics Graduation Project

Project Planning

Project Overview

ProHost is a data analytics project that simulates a hotel management reporting system similar to the Opera Property Management System (PMS) developed by Oracle Hospitality. The project aims to analyze hotel data from different operational areas, including human resources, customer relations, finance, reservations, and services, to uncover meaningful insights that can support data-driven decisions and improve hotel performance.

Project Objectives

- To collect, clean, and integrate hotel data from multiple departments.
- To analyze key operational indicators such as occupancy rate, revenue, customer satisfaction, and staff performance.
- To develop interactive dashboards and visual reports using Power BI and Excel.
- To provide clear, actionable insights for improving hotel operations, profitability, and guest experience.

Scope of Work

The project covers five main areas of hotel analytics:

- Customer Analysis: Demographics, satisfaction, and feedback trends.
- Profitability & Cost Analysis: Revenue, expenses, and profit margins.
- Reservation Analysis: Booking patterns, occupancy rates, and cancellation trends.
- Hotel Services Analysis: Usage of services (e.g., restaurant, spa) and guest preferences.

Tools & Technologies

- SQL Server: For database storage and querying.
- Excel / Power Query: For data cleaning and transformation.
- Power BI: For dashboard design and visualization.
- Python: For advanced data analysis and visualization.

Expected Deliverables

- Clean and well-structured hotel database.
- Analytical reports and dashboards for each focus area.
- A summary report highlighting insights and recommendations.
- Presentation of findings during the DEPI graduation showcase.

Timeline (Tentative)

<i>Phase</i>	<i>Task</i>	<i>Duration</i>
1	Project Planning	Week 1
2	Stakeholder Analysis	Week 2
3	Database Design	Week 3
4	Data Analysis & Dashboard Development	Weeks 4 - 5
5	UI/UX Design	Week 6
6	Documentation & Presentation	Week 7

Project Goal

To create a data-driven hotel analytics report that delivers actionable insights and supports strategic decision-making across all departments.