Project Initialization and Planning Phase

Date	June 2024
Team ID	739806
Project Title	Occupancy Rates and Demand in the Hospitality Industry
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) report

The project report aims to analyze power consumption patterns in households using machine learning, providing insights for energy efficiency and cost-saving measures. The project seeks to identify trends and patterns that can help households optimize their energy usage.

Project Overview	
Objective	The primary objective is to analyze the occupancy rates and demand and provide insights to the users by implementing advanced machine learning techniques, ensuring faster and accurate results.
Scope	The project provides the occupancy rate and demand analysis which helps customers optimize their consumption.
Problem Statement	

Description	The project aims to analyze occupancy rates and demand patterns in customers to provide insights for finding best hospitality, efficiency and cost-saving measures. By analyzing historical occupancy rates and demand data along with other relevant factors such as weather conditions, occupancy patterns, and hotels usage, the project seeks to identify trends and patterns that can help customers optimize their energy usage.
Impact	This information can help customers adjust their energy usage to reduce costs, identify inefficiencies and opportunities for improvement.
Proposed Solution	
Approach	Applying machine learning and deep learning techniques to analyze and predict best hospitality.
Key Features	-provide insights for finding best occupancy and demand rates efficiency and cost-saving measures.

	- suggesting more energy-efficient alternatives. -provides recommendations to households on how to reduce their energy consumption and save costs.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	Intel(R) Core (TM) i51135G7,4 cores

Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	1 TB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, NumPy, matplotlib, seaborn
Development Environment	IDE	Google Collab, Visual Studio Code
Data		
Data	Source, size, format	Kaggle dataset, 125MB, txt