



VELAMMAL
INSTITUTE OF TECHNOLOGY

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NAAN MUDHALVAN PROJECT(IBM)

IBM AI 101 ARTIFICIAL INTELLIGENCE-GROUP 1

Title : Measure Energy Consumption

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Problem Statement : The problem at hand is to create an automated system that measures energy consumption, analyzes the data, and provides visualizations for informed decision-making. This solution aims to enhance efficiency, accuracy, and ease of understanding in managing energy consumption across various sectors.

Introduction: In today's world, effective energy consumption management is crucial due to its ecological and financial implementation. This document introduces an innovative solution that employs automation to measure, analyse, and visualize energy consumption data, facilitating improved decision-making and sustainable energy practices to reduce the unwanted usage of energy.

System Components: Our automated energy consumption management system consists of three primary elements: data collection devices such as smart meters and sensors for real-time energy usage data collection, analytical algorithms to identify patterns of the system and optimize consumption, and a user-friendly visualization platform to represent the analysis.

Energy Consumption Measurement : Precise energy consumption measurement forms the core of our automated system. We utilize advanced metering techniques and sensors to monitor electricity, water, and gas usage, capturing data at regular intervals to offer detailed insights into consumption patterns. Accurate measurement empowers organizations to make data-driven decisions and embrace efficient consumption practices.

Data Analysis: Data analysis serves as the foundation of our automated energy consumption management system. Utilizing advanced algorithms and machine learning, we scrutinize the gathered data to unveil consumption patterns, detect anomalies, and pinpoint optimization possibilities. This data-centric approach empowers organizations to enhance decision-making, minimize waste, and decrease energy expenses.

Visualization: The visualization of energy consumption data plays a pivotal role in comprehension and effective decision-making. Our automated system provides user-friendly visualizations, including interactive charts, graphs, and heatmaps. These visual representations help stakeholders grasp intricate energy patterns, spot trends, and act on insights. By making data more accessible, our visualization

platform empowers users to take informed steps towards conserving energy.

Benefits : 1) Enhance the efficiency

2) Improved accuracy

3) Cost saving

Conclusion: Effective management of energy consumption is imperative for a sustainable future. Our automated system provides an all-encompassing solution that reduces waste, optimizes efficiency, and equips users with informed decision-making abilities. Embracing automated energy consumption management can lead to a more eco-friendly and prosperous world.