**Problem submission phase 1**

**Problem statement**: Measure Energy Consumption

**Description**

* The problem at hand is the need for an automated system to effectively measure and manage energy consumption across various sectors. This includes commercial buildings, industrial facilities, residential areas, and more
* Energy consumption data is often collected manually or through disparate, outdated systems, leading to inaccuracies and delays in data availability.
* Managing energy consumption efficiently can be complex, with multiple factors affecting usage, including equipment efficiency, occupancy, and external environmental factors.

Design:

* Data Source: dataset containing energy consumption measurements.
* Data Preprocessing: Clean, transform, and prepare the dataset for analysis, Calculate energy efficiency metrics and perform anomaly detection,Generate forecasts for future energy consumption based on historical data and external factors.
* Feature Extraction: Extract relevant features and metrics from the energy consumption data.
* Model Development: Utilize statistical analysis to uncover trends, patterns, and anomalies in the data.
* Visualization: Develop visualizations (graphs, charts) to present the energy consumption trends and insights.
* Automation: Build a script that automates data collection, analysis, and visualization processes.