Problem Definition:

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.

Design Thinking:

1. Data Source: Identify an available dataset containing energy consumption measurements.

2. Data Preprocessing: Clean, transform, and prepare the dataset for analysis

3. Feature Extraction: Extract relevant features and metrics from the energy consumption data.

4. Model Development: Utilize statistical analysis to uncover trends, patterns, and anomalies in the data

5. Visualization: Develop visualizations (graphs, charts) to present the energy consumption trends and insights

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6. Automation: Build a script that automates data collection, analysis, and visualization processes.