**Project Title : Electricity Price Prediction**

**Problem Statement:**The challenge is to develop an accurate and reliable electricity price prediction model that can forecast electricity prices in real-time or over specific time horizons. This model should account for various factors, including supply and demand dynamics, weather conditions, market trends, and regulatory changes, in order to assist consumers, energy traders, and policymakers in making informed decisions and managing their energy costs effectively.

**Project Steps**

**Phase 1: Problem Definition and Design Thinking**

**Problem Definition:**

The problem at hand involves creating a well-defined and data-driven approach for forecasting electricity prices. This encompasses the development of models and methodologies that leverage historical and real-time data to make accurate predictions regarding future electricity prices. The goal is to provide individuals, businesses, and energy market participants with tools and insights to better understand and plan for fluctuations in electricity prices, ultimately optimizing their energy consumption and financial strategies.

**Design Thinking:**

1.Empathize:

- Understand the needs and concerns of stakeholders, such as consumers, utility companies, and policymakers.

- Conduct interviews, surveys, and research to gather insights into the challenges and expectations related to electricity price prediction.

2. Define:

- Clearly articulate the problem and the specific goals of your electricity price prediction model.

- Consider factors like market dynamics, renewable energy sources, and consumer behavior that affect electricity prices.

3. Ideate:

- Brainstorm potential solutions for electricity price prediction, such as machine learning models, statistical analysis, or a combination of approaches.

- Encourage creative thinking and explore various data sources, including historical pricing data, weather patterns, and market news.

4. Prototype:

- Create a simplified version of your electricity price prediction model to test your ideas.

- Develop a basic algorithm or use readily available tools and data to create a working prototype.

5. Test:

- Evaluate the prototype’s performance using historical data and other relevant metrics.

- Gather feedback from stakeholders and experts to refine and improve the model.

6. Implement:

- Develop the final electricity price prediction model based on the feedback and insights from testing.

- Consider scalability and real-time data integration if necessary.

7. Iterate:

- Continuously refine and update the model as new data becomes available and as you gain more experience in predicting electricity prices.

- Stay responsive to changing market conditions and regulatory updates.

Remember, design thinking is an iterative process that values collaboration, empathy, and user-centered solutions. It can help you create a more effective and adaptable electricity price prediction system.