TITLES

- **Chatbot for Energy Efficiency Tips**: Creating a chatbot using Python and Natural Language Processing (NLP) libraries like NLTK or SpaCy that provides personalised energy-saving tips and recommendations to users based on their queries. We can train the chatbot on a dataset of energy efficiency tips and integrate it with messaging platforms like Telegram or Facebook Messenger.

- **Predictive Maintenance Prototype for Appliances**: Building a prototype of a predictive maintenance system for household appliances using machine learning algorithms. Collect sensor data from simulated appliances or online datasets, preprocess the data, and train a simple ML model to predict equipment failures or maintenance needs. We can use Python libraries like scikit-learn or TensorFlow for model development.

- **Smart Energy Management Assistant**: Developing a virtual assistant powered by AI that provides personalised energy-saving recommendations and tips to users based on their energy consumption data, lifestyle habits, and preferences. The assistant can analyse historical usage patterns, offer actionable insights, and suggest ways to optimise energy usage and reduce costs.

- **Energy Consumption Prediction Model**: Developing an AI model using machine learning algorithms to predict energy consumption patterns in buildings or households. Train the model on historical energy data along with weather conditions, occupancy rates, and other relevant factors to forecast future energy usage. This can help users better manage their energy consumption and plan accordingly.

- **Green Data Centers with AI Cooling Systems**: Designing AI-powered cooling systems for data centers that optimise energy usage and reduce environmental impact. Use AI algorithms to dynamically adjust cooling settings based on server workload, temperature sensors, and weather conditions, minimising energy consumption while maintaining optimal operating conditions for IT equipment.