

Personalized Energy Assistant

CSE 551: Smart Energy in the Information Age

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Project Idea and Plan

1. Personalized appliance usage recommender
2. Virtual chat bot to answer personalized and appliance specific queries
3. A multi-modal usage modeling with image and layout data (ambitious)

Data

1. Appliances Energy Consumption -
<https://www.kaggle.com/datasets/gaganmaahi224/appliances-energy-consumption>
2. Smart Home Energy Data -
<https://www.kaggle.com/datasets/ethanedwards77/smart-home-energy-data>
3. Hourly energy demand generation and weather -
https://www.kaggle.com/datasets/nicholasjhana/energy-consumption-generation-prices-and-weather?select=weather_features.csv
4. Energy consumption FAQ dataset
5. Smart device manuals

Deliverables

1. Customized device specific control settings for a user with explanation
2. Smart energy assistant to answer energy usage and saving related questions
3. To accommodate user environment and modeling plans for personalized recommendations