Smart Energy, Smarter Living: Home Energy Management System (HEMS)
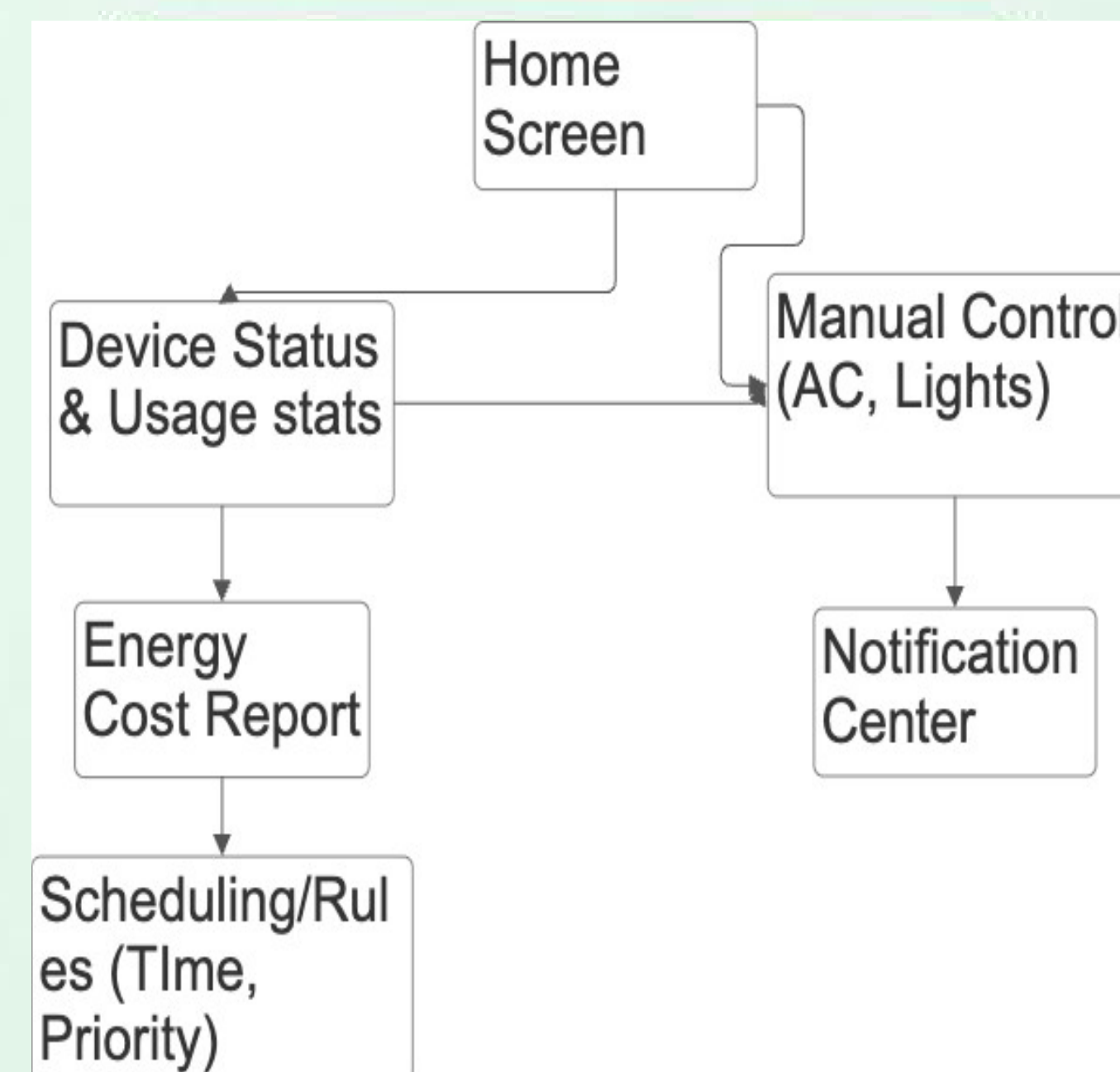
What is a Home Energy Management System?

- Monitoring energy use
- Reducing electricity bills
- Remote control of appliences

How I Brought HEMS to Life

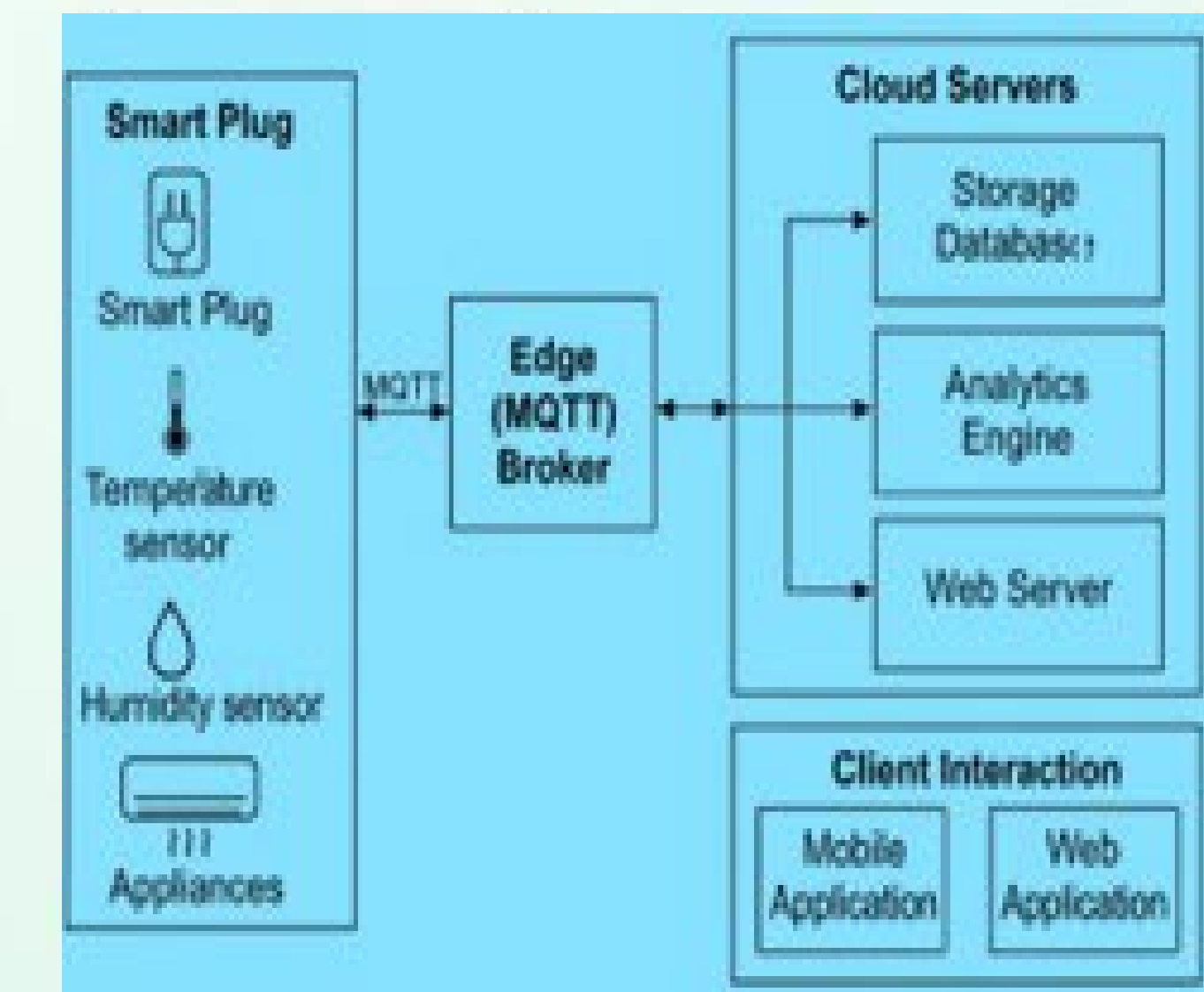- Research and planning
- Developing the mobile app/dashboard

2025 Cal State LA - STEM Core
Summer Making, Academic prep, and Research for Transfer students (SMART) Internship Program

The Brains Behind the System

- Microcontroller
- Sensors: Light (LDR), Temperature, Smart plugs, Energy meters
- Wi-Fi, Zigbee, MQTT

What I Gained from this experience

- This project gave me hands-on experience with IoT and energy data.
- I now understand how to create tech that benefits the enviroment and users.