Design Requirements for Smart Thermostat

FUNCTIONAL REQUIREMENTS

What functions and features will help make sure the solution is useful?

1. Device will use motion sensor and Bluetooth connection (to user's mobile device) to help determine when user has left home, in order to reduce energy use.
2. Device will remember user's preferred temperature settings for different days and times, in order to decide how to automatically adjust itself in the future.
3. Web app will allow user to monitor and change temperature setting of home.
4. Web app will allow user to track energy use and calculate cost savings based on energy efficiency.

USABILITY REQUIREMENTS

What criteria will help make sure the solution is easy to use?

1. Users should be able to to quickly see the current home temperature and system status (heating, cooling, or off) on the device (up to 10 feet away) or web app.
2. Users should be able to quickly adjust their home temperature setting using the device or web app.
3. Users should be able to easily understand their energy use and cost savings using the web app.

USER EXPERIENCE (UX) REQUIREMENTS

What criteria will help make sure the solution is satisfying to use?

1. Users should feel the device is aesthetically pleasing and matches their home decor.
2. Users should feel the web app is clear and visually appealing.
3. Users should feel confident when using the device and web app to control their home climate.

OTHER REQUIREMENTS

What other criteria are important for the solution to meet?

1. The device and web app will require strong passwords and an encrypted Wi-Fi connection to ensure security.
2. The device should be easy to install and work with any existing home heating and cooling systems.