Re: Week 5 Status Report of CENG 355 Solar Panel Project

Raphael Carlo Najera

Sun 2018-03-04, 9:10 PM

To: Austin Tian <Austin.Tian@humber.ca>;
Cc:johnny.son@live.ca <johnny.son@live.ca>;Adrian Caprini <adrianc_34@hotmail.com>;

Hi Austin,

This is our status A update on Solar Capstone. I will be student A, Johnson will be student B and Adrian will be student C. Up to this week, we have created templates for the mobile and PC applications, Database, Software Requirements Specification, Declaration of authorship, Abstract and Introduction. We have recently submitted the Declaration of authorship, Abstract, and Introduction. We are now working on the status update A. As of right now, we are on track.

For the database, we are using firebase to store the data we retrieve from the Solar Panel PVs. Adrian has created a table on firebase where the data is stored in four different sections. Johnson and I have written python code which filters the HTML <table> in order to retrieve specific information. In this case, we are retrieving the power, daily and total yield of energy. Initially, we tested code to see if the data would push to our database using placeholder data. Now we are combining the code where it filters the data and the code to push the data into our database. So far, we have successfully push data from PV1 and PV4.
For the mobile application, as of right now, I have created the template for each of the Solar Panel PVs by using drawerlayout. It will display the data it retrieves from the firebase. The next step is once the database has been fully implemented I will be able to retrieve the stored data on our firebase and display that information on the app.
For the web application, Johnson has created the template. Our current template divides the screen into four screens and each screen is assigned to each solar panel. Each screen will retrieve information from its corresponding table on the firebase. The next step is once the firebase is ready and filled with solar panel data we can continue working on the web application.
As of right now, we can connect and use python code to retrieve data from PV1 and PV4. Once the data has been retrieved it is immediately pushed into firebase for storage. We're currently figuring out how to retrieve the data from PV2 and PV3.

The problems we encountered was communicating to the solar panels as all the IP addresses were not active for connection. The second problem was we were limited on when and where we can work on the project. Since the solar panels are tied to Humber's network, we were not able to test code unless we're at Humber. However, this issue will be resolved once we set up a remote connection with a raspberry pi at Humber. The third problem we encountered is retrieving PV3's data as the data is not available in the HTML. When we checked PV3's HTML, the HTML in inspect mode is different from the HTML shown on the view page source.

Our financial status didn't increase and is on budget because everything for this project was provided for us. We didn't have to spend additional money to make this project possible. We will be using a raspberry pi purchased last semester to remotely connect to the solar panel which can only be accessed on Humber's network using VNC. The cost of the raspberry pi was $112.99.

Solar Capstone Github - https://raphaelnajera.github.io/Sunlight_Sensor/

Sincerely,
Raphael Najera - Solar Capstone

From: Austin Tian <Austin.Tian@humber.ca>
Sent: February 28, 2018 2:40 PM