Name: Salvatore Angilletta

Date: October 11, 2016

Project: Interactive Solar Panel Display

Progress Period: Sept. 4, 2016 – Oct. 11, 2016

Project Website: <https://roflwaffle18.github.io>

Dear Kristian Medri,

I am writing upon your request to update you on our progress of our hardware project, the Interactive Solar Panel Display. After getting our project approved I have completed two deliverables (Project Schedule and Project Budget). I have also achieved the parts acquired milestone and initial construction of the project has begun.

A circuit has been made for our project and has been assembled. Initial testing of the solar panel has been done as well, it achieved a result of three volts under regular lighting conditions in the Humber Labs. A resistor has been added to the circuit between the Raspberry Pi and the solar panel in case our solar panel reaches a voltage higher than three volts. This was added to prevent the Raspberry Pi from getting damaged as it cannot accept any voltage higher than 3.3 volts on the GPIO pins. All other testing needed (sensors and raspberry class) will be done in class on October. 11, 2016.

Financial status of our project has been effected by the drop of the motion sensor. This effects the budget by subtracting $14.81 from the total price. There is still an item not purchased, it is not mentioned on the budget either. It is nylon screws, nylon standoffs and heat shrink wrap. These components are not required with our current progress as of yet because they are for the project box and finishing touches. A total of $157.37 has been spent so far, we managed to save $25.08 in shipping since we bought all components from one place. I also found a pair of wire cutters at home which saved me $20. I am under budget by approximately $150 at the current moment. That concludes the current progress status of our project.

The next tasks to be completed soon include soldering the modular sensor hat, program the code needed to get information from the sensors/solar panel and create/make a connection to a database.

Some links we used in our research are:

GPIO pin layout for Raspberry Pi:

<http://blog.mcmelectronics.com/post/Raspberry-Pi-3-GPIO-Pin-Layout#.V_0jKlUwgdV>

Tutorial on how to connect a DHT11 humidity/temperature sensor:

<https://beebotte.com/tutorials/monitor_humidity_and_temperature_with_raspberrypi>

Tutorial on how to connect an Adafruit BMP085 barometric sensor:

<https://learn.adafruit.com/using-the-bmp085-with-raspberry-pi/overview>

Research on what is Lux:

<https://en.wikipedia.org/wiki/Lux>