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Submission Date: November 22nd, 2016

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| Project | Interactive Solar Panel Display |
| Project Website | https://steve-spiteri.github.io/ |
| Reporting Period | November 16th, 2016 – November 22nd, 2016 |

Dear Kristian Medri,

I am writing to bring you up to date on the progress I have made on my hardware project, the interactive solar panel display. Recent project activities include acquiring the printed circuit board, purchasing headers, and modifying the code to include the LED of the modular sensor hat.

I received the printed circuit board that will accompany the project from the Prototype Lab on Thursday, November 18th, 2016. To complete the printed circuit board, I require a stackable GPIO 24-pin header and two female 5-pin headers. I received a stackable GPIO 24-pin header from the Prototype Lab but they did not have any female 5-pin header available. They provided me with the SKU’s for them and I ordered them from Digi-Key Electronics on Thursday, November 18th, 2016 with Richard Burak and Salvatore Angilletta and Richard received them on Friday, November 19th, 2016. I will be soldering and testing the printed circuit board on Tuesday, November 22nd, 2016. An image of the printed circuit board and its components is available on the projects website.

As per your guidance, I have modified the code to include the LED of the modular sensor hat. The LED will alternate between green and red and indicate the status of the sensors. If the LED is green, it indicates that the sensors are functioning properly. If the LED is red, it indicates the sensors are not functioning properly. Images showcasing the LED’s functionality are available on the projects website.

After the printed circuit board is soldered and tested I will be able to move forward with cutting the acrylic case for the project since I will have the final dimensions. After the case is complete I will be able to buy the components for the finished project such as stand-offs, shrink tubing, etc.

Completing the acrylic case will bring me closer to meeting the objectives of the project as defined in the approved approval. Notable upcoming tasks include calibrating the reading for solar cell output voltage and light level, and pushing the data into a database.

Financial updates are that $5 has been spent since the last update. I purchased the female 5-pin header for my printed circuit board from Digi-Key Electronics (SKU S6103-ND). $162.37 has been spent so far. As a reminder, the budget was approved for $261.77. I am currently under budget by $99.40. Once the acrylic case is complete I plan on purchasing some components for the finished project such as stand-offs, shrink tubing, etc.

On the project website, you will find a hyperlink that helped me produce the code for accessing the LED on the modular senor hat in Python.