

**sdmay19-30: EE 448 Stroboscope**

Week 2 Report

February 11- February 17

**Team Members**Katrina Choong — *Chief Hardware Engineer/Timeline Manager*Meghna Chandrasekaran — *Meeting Facilitator/Chief Software Engineer*Seth Noel — *Chief Hardware Engineer*Kyle Zelnio — *Project Manager*Jessica Bader — *Scribe/Communication Manager/Chief Software Engineer***Summary of Progress this Report**

This week, the hardware team (Katrina and Kyle) collected data to measure the maximum and minimum distances the hall effect sensor could be from the motor to still collect a good reading. They also downloaded Solidworks and created a model of the design to mount the sensor. Our software team (Jessica, Meghna, Seth) debugged the software between the GUI and Arduino to output the RPM on the GUI. They fixed the code so it can now start, stop, and update the GUI in real time.

**Pending Issues**

The hardware team is still finding a way to integrate the casing with the Arduino. They also believe their measurements may be slightly off. The software team is getting varying RPM readings, but needs to verify the accuracy of the measurements.

**Plans for Upcoming Reporting Period**

During the upcoming period, the hardware team (Katrina and Kyle) is going to have a 3D model printed for the mounting of the hall effect sensor and integrate the Arduino into the design. They will also check to see the design fits properly. The software team is going to verify the RPM readings are accurate.

**Individual Contributions**

Team Member	Contribution	Weekly Hours	Total Hours
Katrina Choong	I worked with Kyle this week to measure the minimum and maximum distance the hall effect sensor can take an RPM reading which we found to be a distance of 3mm max. We also got solidworks downloaded and have a 3D model of our design to mount the sensor. Our team also met with Manimaran to discuss the progress and timeline for the rest of the semester.	6	24
Meghna Chandrasekaran	Worked with Jessica and Seth to figure out how to output the RPM reading on our GUI. We found that our issue was that the code was not looping infinitely and had to add changes to our code so that there was an infinite loop until told to stop. After making some changes, we were able to get	6	24

	<p>the GUI to output the RPM readings that were coming back from the Ardiono. We then tested that code on the motor and found that it was smoothly changing the RPM on the GUI. We also met with the professor this week to make sure our project was on track.</p>		
Seth Noel	<p>I worked this week with Meghna and Jessica to get the readings of the RPM from the arduino to output to the GUI. We were able to determine that it was not looping like we had previously believed. Text was finally updating on the GUI. Later we met with Dr. Manimaran Govindarasu to discuss our project and how we expect this semester to go.</p>	6	24
Kyle Zelnio	<p>Testing the min and max distance of the sensor's reading for tolerances. Adjusted V1 mount to allow for more freedom in the X-axis for testing. Starting modeling design for a 3D printed mount to hold the sensor more steady above the motor</p>	7	25
Jessica Bader	<p>This week I worked on debugging the software for connecting between the GUI and the Arduino. We changed the code so it would update the GUI with the new values when the program was running and stop when it was stopped. Also fixed it so that the text on the screen would correctly update. Finally, we mounted the Arduino and ran it while the program was running to ensure the Arduino program was computing answers.</p>	6	24

### Gitlab Activity Summary

4 pushes to branch Software from Meghna, Seth, and Jessica

- Bug fixes to Arduino and GUI code
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