sdmay19-30: EE 448 Stroboscope
Week 2 Report
February - February 10

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) created a map of the system and tested the Hall Effect sensor with their design to ensure it was sufficient for our needs. They also designed and tested a mounting system to mount the stroboscope to the lab motor so the product could be tested. The software team (Meghna, Seth, and Jessica) researched and created a first version of the software required to interact between the GUI and the Arduino. They also started testing by reading the outputs of the Arduino on the GUI, without being connected to the motor.

Pending Issues

The first version of the software for connecting between the GUI and Arduino does not work yet. At this point, it can start and display one reading, but is not taking more readings or is not displaying them. We will need to do more testing to figure out exactly where the error is, as unfortunately we are testing several pieces of software at once. In addition, the first version of the mounting works but is not optimal.

Plans for Upcoming Reporting Period

During the upcoming period, the hardware team (Katrina and Kyle) is going to upgrade the mounting by creating a better solution. They are also going to get a connector for the sensor so they can clean the wires up a bit. The software team (Meghna, Seth, and Jessica) is going to finish testing and fix the bugs with the connection software. We hope to have a GUI which can start and stop the Arduino from reading and can display updated information when the Arduino sends it.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Katrina Choong	I mapped out the system and took measurements of the motor with our design. I helped create a mounting system using aluminum to attach the sensor to the motor. We were able to read a stabilized RPM with the arduino.	6	18
Meghna Chandrasekaran	Worked with Jessica to figure out the communication between the GUI and the Arduio. Worked with Seth to configure the serial port reading for Mac and Windows. Did some research to be able to implement the communication and	6	18

	configuring. Tested if the Arduino code works with Seth by reading the outputs to the terminal rather than the GUI and figured out where the issues were in the Python code.		
Seth Noel	Determined serial port reading for Mac and Windows. Implented the communication between python and the arduino.	6	18
Kyle Zelnio	Created a mount for the hall effect sensor to get a good signal off the Chuck that the motor already has. Tested placement of sensor by editing the Arduino code to output an RPM signal to console and compared it to stroboscope	6	18
Jessica Bader	Worked on implementing the communication between Python and the Arduino, so the GUI can control starting and stopping of the measurements. First, this required research into how to ideally implement this. Then, it required designing how we would implement this in our code.	6	18

Gitlab Activity Summary
4 pushes to branch Software from Meghna and Jessica
- Connection code on the Arduino
- Connection code on the GUI
- Update of the gitignore file