

sdmay19-30: EE 448 Stroboscope

Week 12 Report

April 15 - April 21

Team MembersKatrina 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**

The hardware team (Katrina and Kyle) worked on creating aluminum mounts to hold the fork and sensor mount for the DC motors. They also built the circuit boards for the field testing. The software team (Meghna, Jessica, and Seth) tested the system to verify our accuracy. The full team helped set up they systems in the lab and take feedback on our documentation of the setup process. We also took feedback on the product during the lab. Jessica and Seth worked on implementing the suggestions in the software code. Katrina also updated the semester two timeline. Jessica worked on the poster and documentation.

Pending Issues

We need the supplies to come in for the next round of field testing. We also had to manually shave off a bit of the 3D print to get the mount to fit correctly. The software still needs to apply the feedback to make a help button.

Plans for Upcoming Reporting Period

The hardware team (Katrina and Kyle) is going to make the mounts to hold the sensor and forks for the AC motor. They are going to put together the hardware so we can all go set up the AC motors in the lab and do the second round of field testing. The software team is going to apply the help button. Seth is going to make sure the documentation makes sense from a system perspective. The full team is going to finish and review the documentation.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Katrina Choong	I worked on creating the aluminum mounts to hold the fork and sensor mount together for all the DC motors. Together as a group, we met to set up the GUI and all the mounts in the motors lab to make sure the sensors were taking the readings properly with the GUI intact. We observed and took notes of any questions, comments, and concerns of the 448 students for in-lab testing. I updated semester 2's timeline.	17	88.5
Meghna	Worked on testing the software again to make sure the RPM values we were getting were	17	87

Chandrasekaran	accurate with the software team. Worked with the whole team to set up the mounts in the EE 448 lab for in-lab testing. Worked on documentation for the Final Report. Was present for the in-lab testing and getting feedback from the students in the EE 448 lab.		
Seth Noel	I did system level testing to check that we were still within our intended range of accuracy. I helped mount all of the motors in the lab for the lab test/demo we did the next day. I was also there for the entire test/demo. I helped review the manual. We tried to take feedback into account and tried to make changes that made sense for our code.	16	100
Kyle Zelnio	Modified the 3D printed mounts to fit the sensor's wires better and gathered all the mounting hardware we needed for each station. Worked with the group to setup four stations in lab and helped the students figure out and stress test the system after teaching the TAs the benefits of the new tach and getting everyone's feedback. Helped with formatting on the poster. Spent a good while creating protoboard filter/arduino circuits for each of the stations	16	90
Jessica Bader	Did system-level testing. Put the code on the Arduino boards. Also helped set up the Arduino board in the lab. Wrote a manual to describe the process of setting up the full system and tested that with a user who had no experience in the system. Took feedback and updated the documentation accordingly. Also did field testing and took feedback from students. Applied field feedback to the software (most of the feedback). Also worked on the poster and documentation .	24	98

Gitlab Activity Summary

5 pushes from Jessica and Seth including:

- Getting rid of hard-coding in the error-flag
- Getting rid of hard-coding the time in the Arduino
- Updating the GUI to label RPM
- Getting rid of the start/stop functionality
- Flushing from the Arduino
- Updating the GUI layout
- Closing the port upon quit