EE/ CprE / SE 492 - sddec20-25

Automated Battery Characterizer

Week 12 Report

10/26/20 - 11/08/20
Client: Solar Car
Faculty Advisor: Nathan Neihart

Team Member Roles
- **Kyle Czubak:** Scribe
- **Ben Kenkel:** Meeting Facilitator
- **Joe DeFrancisco:** Chief Engineer & Team Lead
- **Ryan Willman:** Safety Manager
- **Bryan Kalkhoff:** Report Manager
- **Connor Luedtke:** Test Engineer

Weekly Summary

      Over the last two weeks we got the first revision of hardware in. The board was assembled to a testable state and hardware testing started. Immediately after powering up for the first time, we discovered a layout issue. There is a small overlap between a trace and via, causing a short circuit. Once that issue was noted, we started loading software onto the microcontroller. We have been able to successfully communicate with two of our I2C devices. The other two continue to cause problems.

      We also started working on the poster, updating the design doc, and our final IR Presentation. We have most of the design doc work completed and a good start on the poster.

Past Week Team Accomplishments:
- Hardware in and assembled
- Software/Hardware interaction and testing started
- Successfully communication with two I2C devices
- CAN output is functional

Pending Issues:
- I2C still not cooperating with all devices installed
- Unable to test significant parts of the board till this communication issue is resolved.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Bryan Kalkhoff	Helped test and debug the board	25	70
Kyle Czubak	Tested the software on the board and helped out with writing the app	10	50
Ben Kenkel	Worked on UI, worked with kyle to get CAN communication and the databases	10	50

	going.		
Ryan Willman	Poster and Design Doc work	10	60
Joe DeFrancisco	Soldered the board. Started hardware testing and debugging process.	30	120
Connor Luedtke	Poster Final reports	10	10

Upcoming Plans

Joe DeFrancisco
- Continue to debug I2C issues. May need to order parts to make more progress.
- Updating design doc implementation and testing sections with significant more detail.

Connor Luedtke
- Complete the poster as well as design doc and any other documentation

Ryan Willman
- Continue with Poster and Final doc

Ben Kenkel
- Get UI polished
- Finish PI side code for receiving/storing/displaying test data.

Bryan Kalkhoff
- Continue work debugging the board
- Edit the design document to reflect the project

Kyle Czubak
- Finishing up the Flask app
- Finishing up the embedded code

Summary of Weekly Advisor Meeting

Neihart helped us get ideas on how to solve the current issues. We believe we have a good plan to fix them by 11/15.