# EE/ CprE / SE 492 - sddec20-25

Automated Battery Characterizer

Week 2 Report

8/16/20 - 8/30/20
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**

In the past two weeks, progress has been made on creating and ordering the micro pcb. This allows the software team to work in parallel so when the hardware design is finished the embedded code will be complete. We have started to finalize our schematics and will be able to have a rev 1 pcb within two weeks.

**Past Week Team Accomplishments**:
- Basic GUI
- Rev 1 of schematic complete
- Prototype PCB of load circuit
- Microcontroller dev board designed

**Pending Issues:**
- Board Layout to reduce cost
- Potential time to received PCB

**Individual Contributions**

| Team Member | Contribution | Weekly Hours | Total Hours |
|---|---|---|---|
| Bryan Kalkhoff | Created  Micro test board project and spect out parts for circuit protection and I2C multiplexing | 10 | 10 |
| Kyle Czubak | Worked on website prototype and finished database diagram. | 10 | 10 |
| Ben Kenkel | Started working with raspberry pi side software. | 10 | 10 |

| Ryan Willman | Finalized Micro PCB Layout | 10 | 10 |
| Joe DeFrancisco | Load circuit prototype. Addressing design review concerns from last semester. | 15 | 15 |
| Connor Luedtke | Review minor design revisions and battery placement | 10 | 10 |

**Upcoming Plans**

### Joe DeFrancisco
- Finalize schematic
- Streamline BOM
- Update design rules and net classes

### Connor Luedtke
- Complete outstanding schematic changes and determine necessary changes for inverted battery polarity

### Ryan Willman
- Begin Main Board PCB Layout

### Ben Kenkel
- Start work on creating website template pages and start working on page interactions

### Bryan Kalkhoff
- Finish looking into I2C multiplexing
- Create a spreadsheet containing all the I2C address and what we will need with that address
- Verify schematics

### Kyle Czubak
- Finish working on website prototype.
- Make flask app skeleton code.
- Started working on embedded C libraries.

**Summary of Weekly Advisor Meeting**

We have moved to bi-weekly meetings with our advisor since we haven't had many issues, and have been able to make progress without needing much for help. We have discussed with Dr. Neihart our plans for the user interface on the raspberry PI. Advisor feels we are in good shape to have the project completed well before the deadline.