

## **EE/CprE/SE 491 WEEKLY REPORT 9**

**12/2/2025**

**Group number: 6**

**Project title: CyVital**

**Client &/Advisor: Dr. Meng Lu**

### **Team Members/Role:**

Kate Endersby - proofreading

Claire Haas - Comments and extended discussion, weekly summary

Reza Choudhury

Max Tanruther

### **Weekly Summary**

The hardware team worked on updating the PCB based on signal integrity tests from the previous prototype. The hardware team also worked on adding the component selection to a DigiKey Cart list.

The software team worked on getting software ready for the custom PCB arriving in a few weeks, along with polishing and renewing existing features.

### **Past week accomplishments**

- Software Team
  - Had a software prototype working on the CyVital Phase I
- Kate Endersby
  - Completed blood pressure plotting
- Claire Haas
  - Routed the PCB as 4-layer, dual-sided
    - Trace width modification for current and voltage requirements as well as impedance matching
    - Added silkscreen onto top-side with CyVital logo
  - Finished adding materials to DigiKey cart
    - Chose materials to avoid tariffs
    - May need to remove components based on what ETG has in stock
- Reza Choudhury
  - editing software to be integrable to the new PCB instead of breadboard implementation

### **Pending issues**

- Reaction plotting still needs LED reaction trigger

### **Individual contributions**

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours this week</u> <u>(11/18-12/2)</u>	<u>HOURS</u> <u>cumulative</u>
Kate Endersby	<ul style="list-style-type: none"> <li>- Blood pressure plotting</li> <li>- integration</li> </ul>	6	66
Reza Choudhury	<ul style="list-style-type: none"> <li>- PCB preparation</li> <li>- Polishing, UI features</li> <li>- Data smoothing</li> </ul>	11	54
Claire Haas	<ul style="list-style-type: none"> <li>- PCB routing</li> <li>- DigiKey BOM</li> </ul>	12	74

**Comments and extended discussion**

- Will rush order PCB to assure delivery
- Arrange time over break to assemble PCBs?

**Plans for the upcoming week**

- Software Team
  - Investigate using PyInstaller
  - Code improvements while waiting for PCB
- Claire Haas
  - Change code in [Scope.py](#) due to different analog MUX selections on PCB
    - Change wires on the breadboard prototype
    - Test the new code with prototype before merging to main base
  - Meet with Jacob to do final revision and ordering

**Summary of weekly advisor meeting**

The group postponed the weekly advisor meeting to Friday. The group will present the current Faculty Presentation Slideshow as well as the Final Design Document to the professor. Edits will occur based on feedback, and the group will meet the day before the Faculty Presentation to rehearse.