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**EE/CprE/SE 491 WEEKLY REPORT 05**

**4/8-4/21**

**Group number: 49**

**Project title: Laser Target Hit Sensor**

**Client &/Advisor: Tyler Brockely & Jaydon Kim**

**Team Members/Role:**

**Lincoln Khongmaly – Software Developer**

**Akashkumar Patel – Software Developer**

**Adam Runde – Circuit Board Design**

**Sidney Stowe – Arduino Design**

**Elijah Bryant – Product Assembly**

**Neftali Medina – Product Design**

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○ **Weekly Summary**

We are in full assembly mode. The client has requested that we get 3 working targets built and ready to demonstrate. We have ordered the parts and have finished the assembly of the first module.

We have also been working on the report, presentation, and poster that are due during dead week.

○ **Past week**

- Assembled one target to test different methods of detection
- Power testing of the Pico's GPIO outputs
- Voltage regulator testing
- Decreasing dead zones in the board (these are places where the photodiodes are not picking up the laser light)
- Finished poster
- Working on PowerPoint for presentation

- **Pending issues**

The first issue deals with the amount of time left for building the final 2 modules. We will have to split up the assembly work amongst our team in order to finish them within a week or so.

We are also concerned with the motor's ability to set off the client's vibration receiver. The Pico IC we are currently using does not output much power, causing the motor to vibrate very little. Otherwise, the design of our prototype is working well.

- **Individual contributions**

<b><u>NAME</u></b>	<b><u>Individual Contributions</u></b>	<b><u>Hours this week</u></b>	<b><u>HOURS cumulative</u></b>
Lincoln Khongmaly	Soldered Boards, spoke to client and advisor	3	15
Akashkumar Patel	Attended team meetings and viewed the Micro Python code to fix errors	3	15
Adam Runde	Attended team meetings and began assembling parts	3	15
Sidney Stowe	Attended team meetings, soldered boards, and helped with Micro python.	3	15
Elijah Bryant	Attended team meetings and soldered boards together	3	15
Neftali Medina	Attended team meetings, troubleshooted the Pico's power issues with different motors, and determined whether the motor would effectively trigger the flag using vibration.	3	15

- **Comments and extended discussion** *(Optional)*

None at this time

- **Plans for the upcoming week**

*Lincoln Khongmaly* – Help solder target together and figure out if anything else is needed.

*Akashkumar Patel* – Assist with updating and improving code for lower-intensity lasers.

*Adam Runde* – Sand down clear acrylic sheet and assist with soldering board.

*Sidney Stowe* – Will assist Adam in Soldering the board. Will help with the code if not figured out by the next meeting.

*Elijah Bryant* – Will assist with wiring the raspberry pi that will be used in the diagram.

*Neftali Medina* – Will build a portion of the next module once the parts are here. This includes soldering and testing the electrical connections of the PCB board.

- **Summary of weekly advisor meeting** *(If applicable/optional)*

*We met and discussed how the poster looked. He mentioned that we need to shorten our words and replace them with graphics. We also got a few tips on why the Pico is not powering the vibrating motor effectively.*