- **Title**: Smart Walker, BME 402

- **Date**: 2/14/25 - 2/20/25

Last Name	First Name	Role	Email
Nimunkar	Amit	Advisor	ajnimunkar@wisc.edu
Kutschera	Dan	Client	kutschera@att.net
BlomWillis	Nolan	Communicator	blomwillis@wisc.edu
Schiltz	Eva	BSAC	emschiltz@wisc.edu
Parsons	Jacob	BPAG	jcparsons@wisc.edu
Waldenberger	James	BWIG	jwaldenberge@wisc.edu
Kolnik	Owen	Leader	okolnik@wisc.edu

- **Problem statement**: In the rehabilitation process of acute strokes or similar conditions, it is necessary for the patient to be able to walk independently so they can safely return home. Our team must design a device that works in conjunction with a standard walker that will measure the speed and distance the patient walks and the pressure applied to the walker.

- **Brief status update**: We have taken the next steps in fabrication of the hold cell holders and IR sensor.

- **Difficulties / advice requests**: No difficulties or advice requests for this coming week.

- **Major team goals for the next week**: Next week the team plans to complete the IR sensor testing and begin the fabrication of the complete circuit on the protoboard and the associated code. Additionally, the team will look to integrate the load cell holders into the design and potentially begin preliminary testing. The team will also work on the preliminary deliverables.

- **Next week's individual goals**: A concise statement of intended action to continue progress on the project - be specific, i.e. what will you research.

  Eva: Help with integrating completed elements into the walker and write preliminary report.

  Jacob: Determine where the error for the IR sensor is coming from and complete its individual testing.

  Nolan: Complete fabrication of new load cell holders as well as working on the preliminary report.

  James: Start soldering the electrical components to the final proto-board.

  Owen: Order switch and protoboard from Digikey. Help with attaching and potentially testing the load cell holders. Find wire sheath for better aesthetics. Work on preliminary report.

Project Goal	Deadline	Assigned	Progress	Completed
Select Journal	2/7	Team	100%	Y
Preliminary Presentation	2/7	Team	100%	Y
Preliminary Deliverables	2/26	Team	50%	N
Invention Disclosure Report (optional)	3/7	Team	0%	N
Executive Summary	4/18	Team	0%	N
Outreach Materials	4/18	Team	20%	N
Final Presentations	4/25	Team	0%	N
Final Deliverables	4/30	Team	0%	N

- **Previous week's goals and accomplishments**:

  Team: The IR sensor fabrication/integration into the leg was done and preliminary testing has begun. Printed new load cell holders, electrical housing, and display holders. Started finalizing electronics.

  Eva: Tested the fit of the new load cell holder design on the walker and printed the final load cell holder prototype.

  Jacob: This week I worked on testing the IR sensor with the taped wheels and assisted in integrating the sensor into the leg with Owen.

  Nolan: Worked on new load cell holder design. Completed fabrication protocol for the implementation of the new load cell holders.

  James: Did some troubleshooting for the load cell circuit, wasn't able to fully finish.

  Owen: Printed display holder and electrical housing, this involved troubleshooting CAD designs to make the models compatible with SLA printing. Assisted in fabricating the wheel leg to allow attachment of the IR sensor and performed some preliminary testing with Jacob.

  Activities: a concise accounting of time spent working on the project.

	Eva	Jacob	Nolan	James	Owen
Week 1	3 hrs	4 hrs	2.5 hrs	2 hrs	3 hrs
Week 2	2 hrs	3 hrs	5 hrs	2.5 hrs	6.5 hrs
Week 3	3 hrs	4 hrs	2.5 hrs	4 hrs	4 hrs
Week 4	2.5 hrs	8 hrs	2hrs	4 hrs	9 hrs