Weight Bearing Sensor

Client: Daniel Kutschera
Advisor: Prof. David Dean
Team Members:
Nikolai Hess (nphess@wisc.edu) - Leader
Jetzu Thao (jthao27@wisc.edu) - BSAC
Norah Greer (njgreer2@wisc.edu) - BWIG
Keira Ferrigan (kferrigan@wisc.edu) - BPAG
Cassity Dechenne (dechenne@wisc.edu) - Communicator
Date: September 12th, 2025 - September 16th, 2025

Problem statement

Patients with, or in recovery from, many conditions have restrictions on how much weight they can safely put onto their legs without causing themselves further injury. While there are some ways to attempt to ensure this requirement is met, they are difficult to implement, do not work as well, or provide as much feedback as would be helpful to patients and those assisting them. The goal of this project is to design a low-profile, easy-to-use device to measure and record the amount of weight put onto the legs of a patient, and give feedback to the patient and care providers to ensure their safety precautions are being met.

Brief status update

- Had our first advisor meeting and discussed expectations
- Had our first client meeting and discussed project ideas and designs
- Completed our PDS and preliminary brainstorming.

Difficulties/advice requests

None at this time

Current design

No design at this time

Materials and expenses

No materials or expenses at this time

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
									$0.00	
									$0.00	
Category 2										
									$0.00	
									$0.00	
								TOTAL:	**$0.00**	

Major team goals from last week

1. Continue research
2. Brainstorm questions for client meeting and meet with client
3. Complete PDS
4. Research previous team's design and find ways to improve on it

Major team goals for the next week

1. Work on product design
2. Continue research on the device and the competition
3. Work with the client and advisor to narrow down product goals
4. Establish an official date for the next client meeting

Last week's individual goals

- Nikolai Hess: Continue researching, brainstorm designs, meet with our team to discuss concrete next steps.
- Jetzu Thao: Research existing designs, competing designs, mechanics of designs. Meet w team to further plans
- Norah Greer: Share research with the team, brainstorm collaboratively.
- Keira Ferrigan: Continue researching, continuing to get to know the team.
- Cassity Dechenne: Finalize meet up day/time with client, continue researching and communicating with advisor.

Next week's individual goals

- Nikolai Hess:Continue brainstorming ideas, come up with initial sketches of ideas and circuits, and how to combine the two.
- Jetzu Thao:
- Norah Greer: Continue brainstorming ideas, pick a few ideas to go in-depth on.

- Keira Ferrigan: Continue brainstorming ideas and communicating them with our team. Researching the sensors of existing designs
- Cassity Dechenne: Continue communicating with client and advisor, work on design ideas, continue researching.

Timeline

https://docs.google.com/spreadsheets/d/1GoAuANy3F-ltP7vhI7g-B9dxuefjj8c50qzYs246SlE/edit?usp=sharing

Activities

Name	Date	Activity/Previous Week's Accomplishments	Time (h)	Week Total (h)	Sem. Total (h)
Nikolai Hess	9/17/2025 9/18/2025	PDS research/work	1 3	4	5
Jetzu Thao					1
Norah Greer	9/17/2025	PDS research/work	2	2	3
Keira Ferrigan	9/18/25	PDS work/research	2	2	3
Cassity Dechenne	9/18/25	PDS work / research / communication	3	3	4