

- **Title:** Smart Walker, BME 400

- **Date:** 9/13/24 - 9/19/24

Last Name	First Name	Role	Email
Nimunkar	Amit	Advisor	ajnimunkar@wisc.edu
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- **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:** This week we completed both the PDS and our literature review on different components that could be used for the smart walker.
- **Difficulties / advice requests:** No difficulties or advice requests for this coming week.
- **Major team goals for the next week:** Create a design matrix based on individual walker design ideas.

- **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: Brainstorm ideas for walker sensors and fill out a design matrix to determine preliminary design.

Jacob: Construct design matrix and brainstorm design ideas

Nolan: Work on formulating a design matrix and design ideas

James: Start designing block diagrams and/or circuits for each different sensor.

Project Goal	Deadline	Assigned	Progress	Completed
Initial meeting with client	9/12	Team	100%	Y
Gather research/project information	9/19	Team	100%	Y
Product Design Specification (PDS)	9/20	Team	100%	Y
Design Matrix	9/27	Team	0%	N
Preliminary Presentation PDF	10/4	Team	0%	N
Preliminary Report	10/9	Team	0%	N
Order/Gather Materials	10/11	Team	0%	N
Create prototypes, test	11/8	Team	0%	N
Final fabrication	11/20	Team	0%	N
Test and finalize final design	11/27	Team	0%	N
Poster Presentation PDF	12/6	Team	0%	N
Final Report	12/11	Team	0%	N
Final Notebook Team	12/11	Team	0%	N

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

Team: The team completed the PDS, formulated a timeline, and conducted a literature review.

Eva: Completed research on walker standards for the PDS and wrote my sections. Looked into sensors to measure the pressure and speed of the walker.

Jacob: Researched various devices that can work in conjunction with a raspberry pi to measure distance and speed, also completed my part of the PDS.

Nolan: Completed PDS as well as researched pressure sensors and speed sensors.

James: Completed PDS, researched types of sensors that were used by competing devices in similar applications.

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

	Eva	Jacob	Nolan	James
Week 1	3 hrs	2 hrs	2 hrs	2 hrs
Week 2	3 hrs	4 hrs	4hrs	3.5 hrs