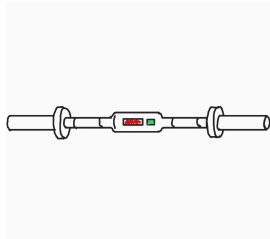
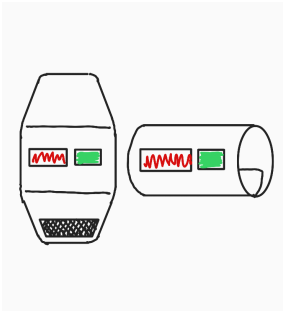
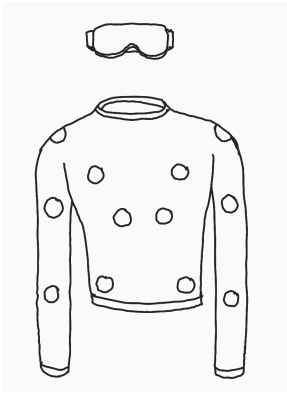


- **Title:** Preventing Weightlifting Injuries by Barbell Modifications, Weightlifting Injuries, BME301


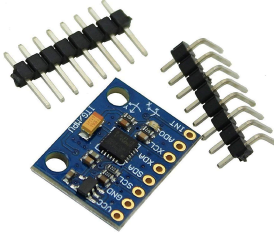
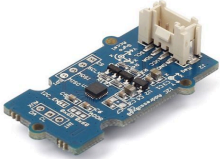
- **Date:** 2/22/24-2/29/24

Last Name	First Name	Role	Email
Settell	Megan	Advisor	settell@wisc.edu
Gold	Robert	Client	bob.gld@gmail.com
BlomWillis	Nolan	Leader	blomwillis@wisc.edu
Kafar	Kaden	Communicator	kafar@wisc.edu
Parsons	Jacob	BSAC	jcparsons@wisc.edu
Waldenberger	James	BWIG	jwaldenberge@wisc.edu

- **Problem statement:** Over one million weightlifters each year experience weightlifting injuries that put them in the emergency room. Of these one million, 18-46% are reported to be caused by bench pressing a barbell. Our team's task is to create a pitch-able system that increases safety for lifting, specifically bench pressing.
- **Brief status update:** Preliminary presentation slideshow was finished up by the team and touched up after peer review in class Wednesday.
- **Difficulties / advice requests:** No difficulties or advice requests for this coming week
- **Current design:** We are thinking about going with a barbell attachment that will use radar to calculate the movement of the barbell during the lift.

Design	Full barbell		Barbell attachment		Full suit + VR	
						
Safety (25)	4/5	20	5/5	25	5/5	25
Ease of Use (20)	4/5	16	5/5	20	2/5	8
Uniqueness (20)	3/5	12	2/5	8	5/5	20
Marketability (20)	3/5	12	4/5	16	5/5	20
Cost (10)	3/5	6	5/5	10	1/5	2
Ease of Fabrication (5)	2/5	2	4/5	4	1/5	1
Overall Score:	68		83		76	

Technology	Radar/Lidar	Accelerometer	IMU
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Accuracy (25)	5/5	25	4/5	20	3/5	
Reliability (25)	3/5	15	4/5	20	4/5	
Marketability (20)	5/5	20	2/5	8	3/5	
Cost (15)	2/5	6	4/5	12	3/5	
Ease of Fabrication (10)	2/5	4	4/5	8	3/5	
Safety (5)	5/5	5	5/5	5	5/5	
Overall Score:	75		72		67	

- Materials and expenses:** a concise accounting of the amounts and types of expenses incurred on the project. Use the template provided here: <http://bmedesign.engr.wisc.edu/course/resources/#bpag>

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	QTY	Cost Each	Total	Link
<b>Category 1</b>										
									\$0.00	
									\$0.00	
<b>Category 2</b>										
									\$0.00	
									\$0.00	
								<b>TOTAL</b>	<b>\$0.00</b>	

- Major team goals for the next week:** Complete preliminary report as a team.

- **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.

Kaden: Finish up preliminary deliverables and get parts ordered for prototypes. .

Jacob: Finish preliminary deliverables and provide feedback to teammates.

Nolan: Help team complete the preliminary report. Also give team feedback on feedback fruits.

James: Finish preliminary report, provide team feedback, and work on Arduino prototype.

Project Goal	Deadline	Assigned	Progress	Completed
Initial meeting with client	1/31	Team	100%	Y
Gather research/project information	2/2	Team	100%	Y
Product Design Specification (PDS)	2/8	Team	100%	Y
Design Matrix	2/15	Team	100%	Y
Preliminary Presentation PDF	2/26	Team	100%	Y
Preliminary Report	3/1	Team	0%	N
Order/Gather Materials	3/20	Team		
Create prototypes, test	4/22	Team		
Final fabrication	4/22	Team		
Test and finalize final design	4/22	Team		
Poster Presentation PDF	4/22	Team		
Final Report	5/1	Team		
Final Notebook Team	5/1	Team		

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

Team: The code for the ultrasonic sensor was created and touched up by Kaden. Worked on Diversity Equity and Inclusion for design ideas to take into consideration users of all skill levels.

Kaden: Worked on the preliminary presentation and updated code to have a more clear and concise output as well as be more readable.

Jacob: Worked on preliminary presentation and deliverables.

Nolan: Helped complete my portion of the preliminary presentation.

James: Worked on and practiced the preliminary presentation.

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

	<b>Kaden</b>	<b>Jacob</b>	<b>Nolan</b>	<b>James</b>
<b>Week 1</b>	2.5hrs	2.5 hrs	3hrs	2.5hrs
<b>Week 2</b>	2 hrs	1.5 hrs	2hrs	1.5hrs
<b>Week 3</b>	1.5 hrs	1.5 hrs	1.5hrs	1hr
<b>Week 4</b>	2.5 hrs	2 hrs	1.5hrs	1hr
<b>Week 5</b>	2 hrs	1.5 hrs	1.5hrs	1.5hrs