

Glucose Alerting System

Client: Olive Cernigila & Callie Berg

Advisor: Dr. John Puccinelli

Team:

Isabel Ploessl - Co-Team Leader

Claudia Beckwith - Co-Team Leader

Lauren Klein - BSAC

Ella Prose - BPAG

Audrey Zeller - BWIG

Kiera Klemm - Communicator

Date: 11/13/2025

Problem Statement:

The overall goal of the Continuous Glucose Monitoring Bracelet is to make blood glucose status more clearly visible, understandable, and actionable for anyone supervising a young child with Type 1 Diabetes. Studies show that a diagnosis of diabetes can become just as stressful for parents to monitor and understand, as it is for the kids. This prototype should help relieve some of this stress by eliciting a visible and actionable signal to parents, which will convey whether treatment is needed or not.

Brief Status Update: Changed circuitry paths, and preparing for Show and Tell

Summary of Weekly Team Member Design Accomplishments:

- Team:
 - 200's: Manufacturing Prototype
 - 300's: Circuit and Code Work

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	- Formatted Progress Report - Tong Lecture - PCB formatting - Meeting with Dr.N	½ hr 1 hr 3 hrs 1 hr	5.5 hrs
Claudia Beckwith	- Tong Lecture - Building Flutter app (front end API) - Flutter connection to PyDexcom	1 hr 3 hr ½ hr	4.5 hr
Lauren Klein	- Filled out Progress Report - BSAC - Tong Lecture - Discussion with Comp Sci Prof - Code with Claudia	½ hr 1 hr 1 hr 1/2 hr 1 hr	4 hrs
Ella Prose	- Tong Lecture - Ordered material - Researched different materials to improve designs	1 hr ½ hr 1 hr	2.5 hrs
Audrey Zeller	- Tong lecture - Printed a new box in PETG - Discussed various to make the box better with those in the design inovation lab	1 hr 1hr ½ hr	2 ½ hrs
Kiera Klemm	- Watched Tong Lecture Video - Improved and reprinted box	1 hr	3 hr

	- Researched new materials for box	1 hr 1 hr	
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Weekly/Ongoing Difficulties:

- PCB Creation
- Creating an app

Upcoming Team and Individual Goals:

- Team:
 - Begin Formatting Poster and Final Report
 - Work on finalizing Prototype
- Isabel Ploessl:
 - Use Dr.N Advice and possibly change final goal of this semester
 - Start Sodering A REF PCB Board
- Claudia Beckwith:
 - Establish connection between Flutter and PyDexcom (Dr. P's version)
- Lauren Klein:
 - BSAC
 - Connect with Dr. N and Prof Kate Jenson on App building
 - Try to finalize code
 - Update team
- Ella Prose:
 - Stay up to date on ordering materials
 - Test the new prototypes
- Audrey Zeller:
 - Start testing of the multiple boxes
 - Reprint as needed for new materials/final designs
 - Update website
- Kiera Klemm:
 - Finalize and print final box design
 - Create final 3-d sketch of box for final poster

Project Timeline :

Project Goal	Deadline	Team Assigned	Progress	Completed
Client Meeting	9/8	ALL	100%	Yes
Weekly Progress Report	9/11	ALL	100%	Yes
PDS	9/18	ALL	100%	Yes
Design Matrix	9/27	ALL	100%	Yes
Preliminary Presentations	10/3	ALL	100%	Yes
Preliminary Deliverables	10/8	ALL	100%	Yes
Show and Tell	10/31	ALL	100%	Yes
Poster Presentations	12/5	ALL		
Final Deliverables	12/10	ALL		

Expenses :

Item	Description	Manufacturer	Part Number	Date	Qty	Cost Each	Total	Link
PLA	30x30x15 mm box	DI Lab	n/a	10/22	6	0.25	\$1.50	
Silicone Band	Silicone band for kids - 38/42 mm	DQ-Tech	113-7232568-5800209	10/13	2	4.95	\$5	https://www.amazon.com/Pol-yjoy-Silicone-Replacement-Compatible-Suitable/dp/B0B28PBHY9/ref=

							sr_1_1?crd=3S57C0WFWLO22&dib=eyJ2ljoiMSJ9.4NFYuRSDRXuxGhR9unpsJKbw81dxLArTu7HRm0RIbgeh60g1sTfaP2QyeSP8nJd-Dk7cljwr_7YsaEx3BhtaXVtBy_PbIPvnMkep42YbF-pnU98WUtrkwtckWK5Bo6yvTOogMrLKXiPtOYyjsjrBO_9p_W1Qo1428LagDmU87EGBeK89pxaHd9-6zwZmVenjEtacsVQd8og2xH1hQO1irk7YTDJ9IVuv7mrC-95Vz1fXOtGl-EV85G2jSim5v-hm2SELJ684ue3RyQE1er3edU9KSyjiyd8koFe6oaUE_dc.Lyhly4hgryeT7-zNXyld2mW-mgtaZCzfIAC3CWoAjCw&dib_tag=se&keywords=Polyjoy+Silicone+Replacement+Band,&qid=1760401499&sprefix
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