

Glucose Alerting System

Client: Olive Cernigila,

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: 10/16/2025

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:

Creating initial prototype, and circuit

Summary of Weekly Team Member Design Accomplishments:

- Team:
 - 200's: SolidWorks Printing
 - 300's: Circuit Work

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	- Team meeting - 300 meeting - Formatted Progress Report - Large Scale Circuit Build	½ hr ½ hr ½ hr 3 hrs	4 ½ hrs
Claudia Beckwith	- Team meeting - 300 meeting - Circuit Build -	½ hr ½ hr 3 hr	4hrs
Lauren Klein	- Team Meeting - 300 Meeting - CITI Training - Circuit Building - Filled out Progress Report - BSAC	½ hr 1/2 hr 2.5 hrs 3 hrs ½ hr 1 hr	8 hrs
Ella Prose	- Team Meeting - Ordered silicone band - 3D designed part of prototype	½ hr ½ hr 2 hrs	3 hrs
Audrey Zeller	- Team Meeting - Made 3D design of prototype case - 3D print design evaluation meetings - Printed the 3D design	½ hr 2 hrs ½ hr 1 hr	4 hrs
Kiera Klemm	- Team Meeting - 3D design of prototype case - 3D print design evaluation meetings	½ hr 1 ½ hr ½ hr	4 hrs

	- Machining training	1 ½ hr	
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Weekly/Ongoing Difficulties:

- Connectivity

Upcoming Team and Individual Goals:

- Team:
 - Prepare for show and tell
 - Continue refining PLA Model
 - Create final circuit schematic
 - Create running Night scout website
- Isabel Ploessl:
 - Nightscout API interface
 - Begin Circuit Schematic
 - Order final circuit materials
- Claudia Beckwith:
 - Google Cloud Connection
 - Nightscout Setup
 - CGM data test pull
 - Design end schematic for show and tell
- Lauren Klein:
 - Continue finalizing Circuit
 - Nightscout
 - BSAC
 - Battery to Circuit connection research
- Ella Prose:
 - Continue ordering materials
 - 3D print box for prototype
- Audrey Zeller:
 - Update website
 - Pickup box from design innovation lab
 - Show and tell prep
- Kiera Klemm:
 - 3D print box prototype
 - Show and tell prep
 - Continue work on the prototype

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	20%	In Progress
Poster Presentations	12/5	ALL		
Final Deliverables	12/10	ALL		

Expenses :

Item	Description	Manufacturer	Part Number	Date	QTY	Cost Each	Total	Link
Silicone Band	Silicone band for kids - 38/42 mm	DQ-Tech	113-7232568-5800209	10/13	2	4.95	\$5	https://www.amazon.com/Polyjoy-Silicone-Replacement-

							Compatible-Suitable/dp/B0B28PBHY9/ref=sr_11?crid=3S57C0WFWLO22&dib=eyJ2IjoiaMSJ9.4NFYuRS DRXuxGhR9unpsJ Kbw81dxLArTu7H Rm0RIbgeh60g1sT faP2QyeSP8nJd- Dk7cljwr_7YsaEx3 BhtaXVtBy_PbIPv nMkep42YbF- pnU98WUtrkwtck WK5Bo6yvTOogM rLKXiPtOYyjsjrBO 9p_W1Qo1428Lag DmU87EGBeK89p xaHd9- 6zwZmVenjEtacsV Qd8og2xH1hQO1i rk7YTDJ9IVuv7mr C-95Vz1fXOtGI- EV85G2jSim5v- hm2SELI684ue3Ry QE1er3edU9KSyji d8koFe6oaUE_dc. Lyhly4hgryeT7- zNXyld2mW- mgtaZCzflAC3CW oAjCw&dib_tag=s e&keywords=Poly oy+Silicone+Repla cement+Watch+B and,&qid=176040 1499&sprefix=pol yjoy+silicone+repl acement+watch+b and,,aps,370&sr= 8-1&th=1
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TOTAL:	\$9.00