

## Glucose Alerting System

Client: Olive Cernigila & Callie Berg, Dr. Beth Martin

Advisor: Dr. John Puccinelli

Design Team:

Isabel Ploessl - Team Leader

Claudia Beckwith – BWIG & BPAG

Lauren Klein – BSAC & Communicator

Business: Kiera Klemm

Date: 4/23/26

### Problem Statement:

Parents and caregivers of children with T1D often struggle to quickly see and interpret glucose readings, leading to stress and delayed decisions. The Wearable Glucose Alerting System aims to solve this problem by providing a clear, visible signal that instantly shows when a child's blood sugar needs attention.

**Brief Status Update: Finishing up our poster, starting the final report!**

Last progress report 😞

### Summary of Weekly Team Member Design Accomplishments:

Whole Team: Poster work and finalizing prototypes

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	<ul style="list-style-type: none"><li>• Fix and edit boxes</li><li>• Format Poster</li><li>• Poster editing</li><li>• Poster practicing</li></ul>	3 hrs 3 hrs 2 hrs 1 hr 1 hr	10.5 hrs

	<ul style="list-style-type: none"> <li>• Team meeting</li> <li>• Format progress report</li> </ul>	½ hr	
Claudia Beckwith	<ul style="list-style-type: none"> <li>• Poster Edits</li> <li>• Poster practice</li> <li>• Report Edits</li> <li>• Team Meeting</li> <li>• App updates</li> <li>• Microcontroller Updates for Dr. P's band</li> </ul>	2 hrs 1 hr 1 hr 1 hr 2 hrs 1 hr	8 hrs
Lauren Klein	<ul style="list-style-type: none"> <li>• Poster Editing</li> <li>• Poster Practice</li> <li>• BSAC</li> <li>• Team Meeting</li> <li>• Soldering/Making Dr. P's device</li> </ul>	2 hrs 1 hr 1 hr 1 hr 2.5 hrs	7.5 hrs
Kiera Klemm	<ul style="list-style-type: none"> <li>• Tong speech writing</li> <li>• Presentation practice</li> <li>• Notebook update</li> </ul>	1 hr 1 hr 1 hr	3 hrs

**Weekly/Ongoing Difficulties: none**

Upcoming Team and Individual Goals:

- Team:
  - Notebook updates
  - Finish Final Report
- Isabel Ploessl:
  - Final Report
- Claudia Beckwith:
  - Final report
  - Notebook
- Lauren Klein:
  - Final Report
  - Feedback Fruits

- Kiera Klemm:
  - Give presentation
  - Final report

## Project Timeline :

Project Goal	Deadline	Team Assigned	Progress	Completed
Client Meeting	1/29	ALL	100%	YES 🎉
Weekly Progress Report	1/29	ALL	100%	YES 🎉
PDS	2/5	ALL	100%	YES 🎉
Design Matrix	2/13	ALL	100%	YES 🎉
Preliminary Presentations	2/20	ALL	100%	YES 🎉
Preliminary Deliverables	2/25	ALL	100%	YES 🎉
Show and Tell	3/20	ALL	100%	YES 🎉
Poster Presentations	4/24	ALL	100%	YES 🎉
Final Deliverables	4/29	ALL	67%	Working 🙌

## Expenses :

Category 1 - Appearance								
Item	Description	Manufacturer	Mft Pt#	Vendor	HS Code	Date	QTY	Cost Each
PLA Box Prototype	Box to fit new electronic compnents	UW Makerspace	N/A	UW Makerspace	N/A	3/11/2026	1	0.
Resin Box Prototype	Resized box for electrical housing	UW Makerspace	N/A	UW Makerspace	N/A	3/17/2026	1	5.
Watch Band	Apple watch compatible silicone band	PolyJoy	DBGJBZ001Q	Amazon	N/A	3/13/2026	2	4.
PLA Box Prototype	Testing new dimensions	UW Makerspace	N/A	UW Makerspace	N/A	3/23/2026	1	0.
Resin Box Prototype	Testing with new circuit components	UW Makerspace	N/A	UW Makerspace	N/A	3/24/2026	1	2.

Resin Box Prototype	Updating power cord hole size	UW Makerspace	N/A	UW Makerspace	N/A	4/12/2026	1	2.
Resin Box Prototype	Smaller size (no internal battery)	UW Makerspace	N/A	UW Makerspace	N/A	4/15/2026	1	2.
Sports Arm Band	Holder for portable charger	YUNYILAN	N/A	Amazon	N/a	4/19/2026	2	7.
Resin Box Final	Final Prototype for poster presentation	UW Makerspace	N/A	UW Makerspace	N/A	4/20/2026	2	2.
Resin Lid Final	Final Prototype for poster presentation	UW Makerspace	N/A	UW Makerspace	N/A	4/20/2026	2	1.
<b>Category 2 - Internal/Electronic Components</b>								
Item	Description	Manufacturer	Mft Pt#	Vendor	HS Code	Date	QTY	Cost Each
Seed StudioXIAO ESP32-C6 (3PCS)	Microcontroller for internal bracelet circuitry	Seed Studio	102010574	Seed Studio	8543709990	2/4/2026	1 (3 pack)	19.
1 x NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers[ID:2226]	LED light for bracelet	Adafruit Industries	2226	Adafruit Industries	N/A	2/4/2026	1	20.
1 x Lithium Ion Polymer Battery - 3.7v 500mAh	Battery for bracelet	Adafruit Industries	1578	Adafruit Industries	N/A	2/4/2026	1	22.
1 x Lithium Ion Polymer Battery - 3.7v 500mAh	Battery for bracelet	Adafruit Industries	1578	Adafruit Industries	N/A	3/24/2026	1	7.
Adafruit Industries LLC LIPOLY BATTERY CHARGER W/USB C	Battery Forward Charger	Adafruit Industries	4410	Adafruit Industries	N/A	3/24/2026	1	5.
Pin Cable Male Header	Battery connector cable	Adafruit Industries	3814	Adafruit Industries	N/A	3/24/2026	2	0.
1 x NeoPixel Jewel - 7 x 5050 RGB LED with Integrated	LED light for Dr. P's own personal bracelet	Adafruit Industries	2226	Adafruit Industries	N/A	4/15/2026	1	23.

