Glucose Alerting System
Client: Olive Cernigila & Callie Berg
Advisor: Dr. John Puccinelli

Design Team:
Isabel Ploessl - Team Leader
Claudia Beckwith – BWIG & BPAG
Lauren Klein – BSAC & Communicator

Business: Kiera Klemm

Date: 2/5/26

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: **We have turned in our PDS and ordered some new materials; we will be starting the design matrix soon!**

Summary of Weekly Team Member Design Accomplishments:

Whole Team: We worked on some new research and edited our PDS

Name	Activity	Time (hr)	Week Total (hr)

Isabel Ploessl	• PDS sections • PDS edits • LED/Microcontroller research • Progress Report Setup	1 hr 1 hr 2 hr ½ hr	4.5 hrs
Claudia Beckwith	• PDS section • PDS edits • Small/large scale pricing mock up • Research for iOS app creation • Purchasing supplies	1 hr 1 hr ½ hr 2 hr ½ hr	5 hrs
Lauren Klein	• PDS Sections/Revision • PDS group editing • BSAC Exec • Research	1 hr 1 hr 1 hr 1.5 hrs	4. 5 hrs
Kiera Klemm	• Client marketing meeting • Market Research • Entrepreneurial opportunity research	1 hr 1 hr 1 hr	3 hr

Weekly/Ongoing Difficulties: No difficulties yet :)

Upcoming Team and Individual Goals:

- Team:
  - Start on Matrix
  - Meet with Olive & Callie
- Isabel Ploessl:
  - Come up with plan for circuit changes
  - Research app creation
- Claudia Beckwith:
  - Connect with CS contact

    - Figure out how to get access to Mac, update code to be iOS app compatible
- Lauren Klein:
    - BSAC
    - Design Ideas for Design Matrix
    - Potential prototyping or soldering once materials come in
    - Look into PCB/circuit revamp with Isabel
- Kiera Klemm:
    - Research on FDA involvement in marketing
    - Brainstorm device name and UI design

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		
Preliminary Presentations	2/20	ALL		
Preliminary Deliverables	2/25	ALL		
Show and Tell	3/20	ALL		
Poster Presentations	4/24	ALL		
Final Deliverables	4/29	ALL		

Expenses :

Category 1 - Appearance										
Item	**Description**	**Manufacturer**	**Mft Pt#**	**Vendor**	**HS Code**	**Date**	**QTY**	**Cost Each**	**Total**	**Link**
Category 2 - Internal/Electronic Components										
Item	**Description**	**Manufacturer**	**Mft Pt#**	**Vendor**	**HS Code**	**Date**	**QTY**	**Cost Each**	**Total**	**Link**
Seeed StudioXIAO ESP32-	Microcontroller for internal	Seeed Studio	102010574	Seeed Studio	85437099 90	2/4/2026	1 (3	19.98	19.98	XIAO C6 microcont

C6 (3PCS)	bracelet circuitry						pack)			roller (3 pack)
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	20.39	20.39	NeoPixel Jewel - 7 x 5050 RGB LED with Integrated Drivers : Adafruit Industries, Unique & fun DIY electronics and kits
1 x Lithium Ion Polymer BaΣery - 3.7v 500mAh[ID: 1578]	Battery for bracelet	Adafruit Industries	1578	Adafruit Industreis	N/A	2/4/2026	1	22.50	22.50	Lithium Ion Polymer Battery - 3.7v 500mAh : Adafruit Industries, Unique & fun DIY electronics and kits
								TOTAL:	**62.87**	