

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: 09/25/2025

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: We have completed the PDS and got a great score! This week, we have been focused on our Design Matrices which we decided to complete 3 of to dive into the various sections of this project more in depth. We have received client feedback on scoring of categories and plan to complete the matrices before our advisor meeting on Friday.

Summary of Weekly Team Member Design Accomplishments:

- Team:
 - Produced design ideas for matrices
 - Research various materials, batteries, and possible connectivity's
 - Client meeting on 9/22
 - Draft of Matrices completed on 9/25

Name	Activity	Time (hr)	Week Total (hr)
Isabel Ploessl	<ul style="list-style-type: none"> • Attend Client Meeting • Research and diagrams for Design Matrix <ul style="list-style-type: none"> ◦ Connectivity • Format/write/edit Design Matrix • Create Progress Report 	1 hr 2 hr 2 hr ½ hr	5 ½ hrs
Claudia Beckwith	<ul style="list-style-type: none"> • Attend client meeting • Research Nightscout and Dexcom Developer program • Research API compatibility • Developed design matrix ideas/criteria • Design Matrix 	1hr 2 hrs 1 hr 1 hr 0.5 hr	5 ½ hrs
Lauren Klein	<ul style="list-style-type: none"> • Attended Client Meeting • Researched Lithium Ion Batteries • BSAC Executive Meeting • Design Ideas & Battery Matrix 	1hr 2.5hr 1hr 1.5hr	6 hrs
Ella Prose	<ul style="list-style-type: none"> • Attended Client Meeting • Researched materials for the band • Researched LED light • Drew designs and did Design Matrix 	1 hr 1 hr 1 hr 1 hr	4 hrs
Audrey Zeller	<ul style="list-style-type: none"> • Attended client meeting 	1 hr 1 hr	4hrs

	<ul style="list-style-type: none"> • Researched lights and materials • Drew/found pictures for design sketches • Worked on the design matrix 	1 hr 1 hr	
Kiera Klemm	<ul style="list-style-type: none"> • Attended client meeting • Researched disposable and rechargeable batteries • Drew and labeled design sketches • Added to design matrix document • Updated client on progress report 	1hr 1hr 1hr .5hr .5hr	4hr

Weekly/Ongoing Difficulties:

- No difficulties now

Upcoming Team and Individual Goals:

- Team:
 - Finish Design Matrices
 - Start looking into material orders based on our matrices
 - Begin Preliminary Presentation and Slides
 - Obtain existing CGM's from clients
- Isabel Ploessl:
 - Begin ordering materials
 - Create the outline of the slides
 - Create the format of the preliminary report
 - Continue updating lab archives with research
- Claudia Beckwith:
 - Start working on Nightscout open-source project
 - Connect with Data Science department on assistance with above
 - Research API compatibility with external device (website?)
 - Work on preliminary presentation

- Lauren Klein:
 - Attend BSAC general meeting with Faculty
 - Continue research for preliminary presentations
 - Work on preliminary report
- Ella Prose:
 - Start planning material orders and handle finances
 - Continue researching materials
 - Work on preliminary presentation slides
- Audrey Zeller:
 - Continue design research
 - Add more research to lab archives
 - Edit preliminary presentation slides
 - Work on preliminary presentation slides
- Kiera Klemm:
 - Continue preliminary research
 - Edit preliminary presentation slides
 - Maintain contact with client over preliminary deliverables

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	90%	Almost!
Preliminary Presentations	10/3	ALL		
Preliminary Deliverables	10/8	ALL		
Show and Tell	10/31	ALL		
Poster Presentations	12/5	ALL		
Final Deliverables	12/10	ALL		

Expenses :

Item	Description	Manufacturer	Part Number	D a t e	Q T Y	C o s t E a c h	T o t a l	L i n k
No purchases scheduled so far								
TOTAL:							\$0.00	