

# MONITORING HYPOGLYCEMIA

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## **Team Members**

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## **Instructor & Team Mentor**

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Dr. Jim Ji

GLYCO   
TREM

# PROBLEM STATEMENT



Neglected hypoglycemia has severe consequences;

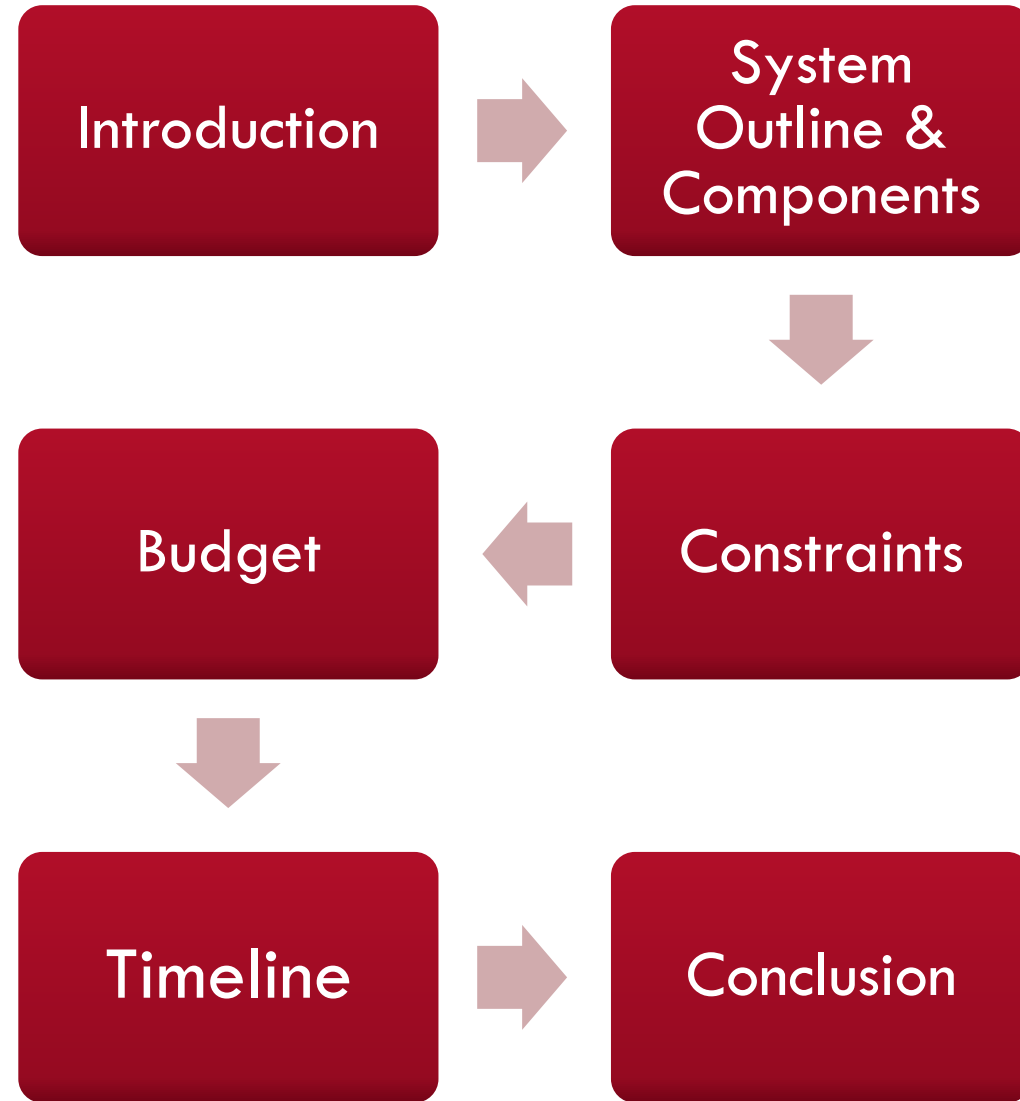


Hypoglycemia unawareness is prevalent among diabetic patients;

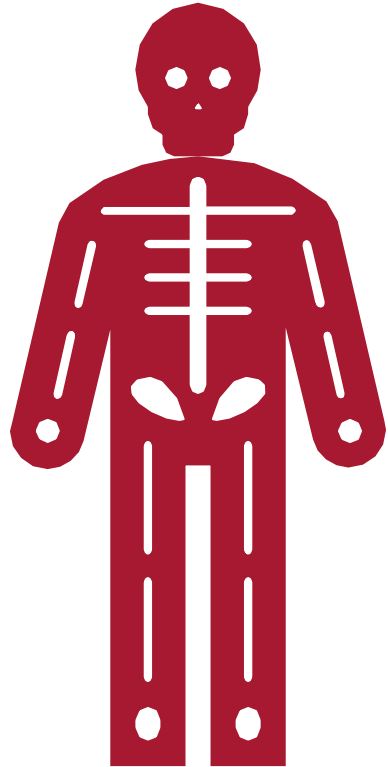


Existing solutions are invasive and costly.

# PRESENTATION OUTLINE



# INTRODUCTION

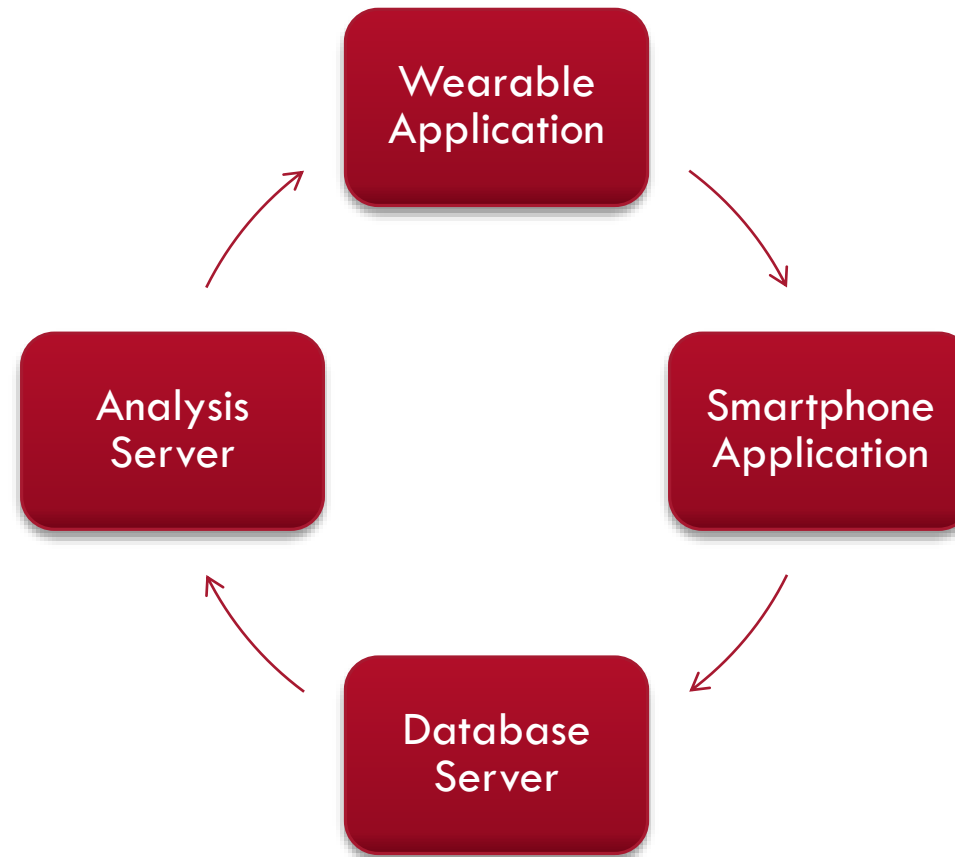


What are hypoglycemic events?

Why does it cause tremors?

How does this relate to GlycoTrem?

# SYSTEM OUTLINE & COMPONENTS



# SYSTEM OUTLINE & COMPONENTS



# CONSTRAINTS



Noise elimination and accelerometer quality



Power consumption



User experience



Cost and budget

# BUDGET

Item	Quantity	Unit Price	Total Price
Polar M600 Smartwatch	1	298\$	298\$
Ticwatch E2	1	159.99\$	159.99\$
Apple Watch	1	384\$	384\$
Galaxy Gear	1	198\$	198\$
Dedicated Server Monthly	10	22.3\$	223\$
Domain Yearly	1	8.69\$	8.69\$
HC-06 MPU6050	2	15.71\$	31.42\$
Lithium Batteries 1/2 AA - 1200mAh	4	10\$	40\$
Apple iPhone 7	1	440\$	440\$
		<b>TOTAL:</b>	<b>1743.1\$</b>



# TIMELINE

	Month	August				September				October				November				December			
	Day	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Task	Member																				
Team Contract	Ghida																				
Project Proposal	All																				
Proposal Presentation	All																				
Initial Website	Skander																				
Customer Needs Survey	Ghida																				
Ethnographic Study Video	All																				
Benchmarking	Skander																				
Functional Modeling	All																				
Final Presentation	All																				
Final Website	All																				
Final Progress Report	All																				

“ Detection of Hypoglycemic Events in Diabetic Patients Through Tremors using Wearables. ”



CONCLUSION

# REFERENCES

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- R. Bhidayasiri, “Differential diagnosis of common tremor syndromes”, *Postgraduate Medical Journal*, vol. 81, no. 962, pp. 756–762, 2005, issn: 0032-5473. doi: 10.1136/pgmj.2005.032979. eprint: <https://pmj.bmj.com/content/81/962/756.full.pdf>. [Online]. Available: <https://pmj.bmj.com/content/81/962/756>.
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- H. Abbas, K. Zahed, L. Alic, Y. Zhu, F. Sasangohar, R. Mehta, M. Lawley, Q. Abbasi, and K. Qaraqe, “A wearable, low-cost hand tremor sensor for detecting hypoglycemic events in diabetic patients”, 2018.

Questions?



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