

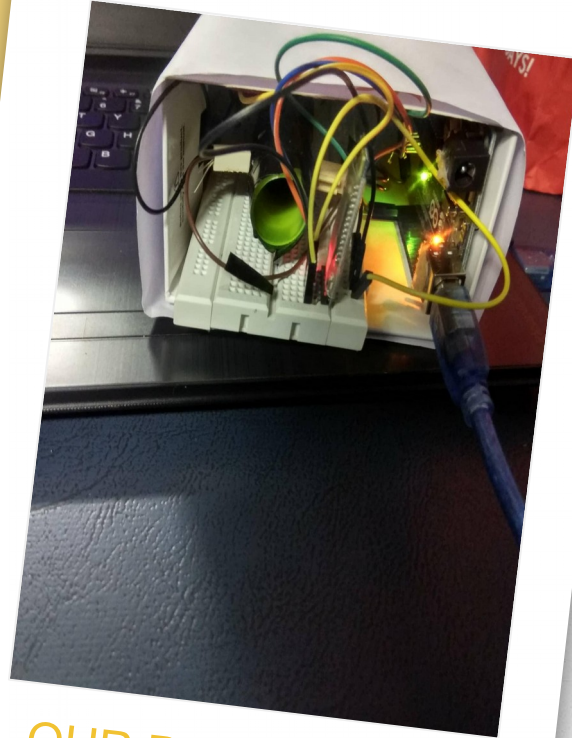
NON INVASIVE GLUCOSE MONITORING



IIT HYDERABAD



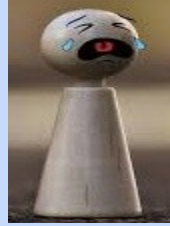
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OUR PROJECT

WHY NON-INVASIVE?

442 million Diabetic Patients



Painful and uncomfortable during blood sampling.

Can lead to fatal infections.

An average diabetic makes less than 2 tests per day instead of recommended 4-7 tests.

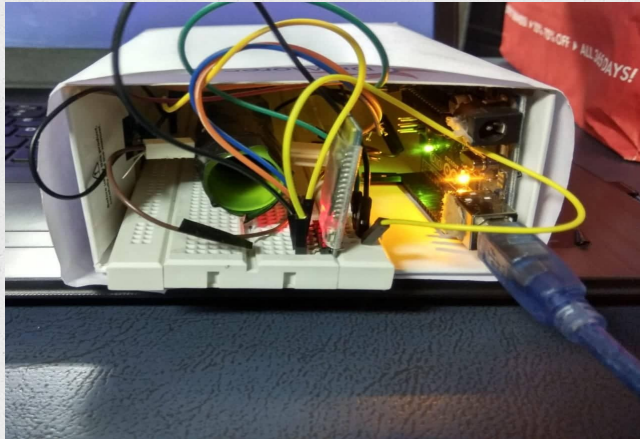


INVASIVE GLUCOSE MONITORING

We used 940 nm NIR led and photodetector to check the variation in glucose concentration.

Procedure:

So to increase accuracy with the help of our campus doctor Anil Kumar we were able to span the most essential glucose ranges (60 -210mg/dl) using around 35 live subjects from hospital and few students from our campus too.Finally we attained 87% accuracy.



Observations:

The subject should not change the way he insert his/her finger.

The subjects skin thickness and colour affects the the solution.

The LEDs and photodetector angles also must be fixed.

Proof Of Concept



Invasive Non Invasive
Value(mg/dl) value

122	120.60
135	139.02
126	128.31
118	121.09
211	220.91
102	100.08
89	84.31
176	173.00
98	102.80
123	116.25

