**Final project proposal**

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**Background:**

Heartbeat sensor is an electronic device that is used to measure the heart rate, like the speed of the heartbeat. Monitoring body temperature, heart rate and blood pressure are the basic things that we can do in order to keep us healthy. Heart rate can be monitored in two ways: one way is to check the pulse either at wrist or the other way is to use a heartbeat sensor.

**Introduction:**

In this project, I designed a heart rate monitor system using Arduino and heartbeat sensor. Heartbeat is measured in beats per minute or bpm, which indicates the number of times the heart is contracting or expanding in a minute. The principle behind the working of the Heartbeat sensor is photoplethysmography. According to this principle, the changes in the volume of blood in an organ is measured by the changes in the intensity of the light passing through that organ. I am going to do the Cardiac Monitoring system of EKG. Connecting an OLED and pulse sensor to the Arduino, when we are touching the pulse sensor, the OLED will show the EKG.

**Components Required:**

* Arduino UNO x1
* OLED display x1
* Breadboard
* Connecting wires
* Heartbeat sensor module

**Possible difficulties**

There might be some difficulties when we are building our project. For example, the heartbeat sensor testing is not very well, or the heartbeat sensor cannot detect the heartbeat. Besides, when we display the EKG on the OLED, it might have some difficulties.