Noninvasive Diabetics prediction

Diabetes is a common chronic disease in mostly all countries worldwide. The most commonly used method to measure glucose levels in blood is an invasive method which is painful, expensive and danger in spreading infectious diseases. Over a long term, the invasive method results in damage of finger tissues. As an alternative, the noninvasive method can be used which facilitates frequent testing, relieves pain and discomfort caused by frequent finger pricks. A noninvasive method of glucose level measurement is proposed. The variation in the intensity of NIR light received from the photo detector after passing through the finger is used to determine the glucose level of blood. Also, this sensor can measure the spo2 and heart rate of the person. This system consists of temperature sensor to measure the body temperature of the person. All these parameters are transmitting into the IOT thingspeak cloud platform via wi-fi using ESP8266 WI-FI module and will be displays on LCD module.

The major building blocks of this project are:

- Power supply.
- Arduino UNO.
- NIR module.
- DS18B20 temperature sensor.
- LCD display.
- ESP8266 WI-FI module.

Software's used:

- ARDUINO IDE.
- Embedded c language.

Block Diagram: