#include <Arduino.h>

#include "DFRobot\_Heartrate.h"

#define heartratePin A0

DFRobot\_Heartrate heartrate(ANALOG\_MODE);

const int NUM\_SAMPLES = 2000; // Collect 2000 heart rate values

void setup() {

Serial.begin(115200);

Serial.println("Heart Rate Sensor Initialized...");

}

void loop() {

static int sampleCount = 0;

if (sampleCount < NUM\_SAMPLES) {

int rawValue = analogRead(heartratePin); // Read raw sensor value

// Ensure a valid signal and avoid noisy data

if (rawValue < 800) {

Serial.println("No Signal");

} else {

heartrate.getValue(heartratePin);

int scaledBPM = map(rawValue, 800, 1024, 60, 180);

scaledBPM = constrain(scaledBPM, 60, 180);

// Send the BPM to Python via Serial

Serial.println(scaledBPM);

sampleCount++;

}

} else {

Serial.println("Done"); // Signal to Python that data collection is complete

while (true); // Stop further readings

}

delay(50); // Adjust delay if needed

}