

## HOW-TO-RUN EACH PROGRAM CODE:

### (1) How-to-Run PPG Data Acquisition Code:

Step 1: Open Arduino IDE on Computer/PC and connect the Arduino board to Computer/PC.

Step 2: Open the RD117\_ARDUINO.ino file and make sure the below subfiles are also included in different tabs otherwise the code will not compile.

Type	People	Modified	Owner	Last modified	File size	⋮
algorithm_by_RF.cpp			B Boon Le	Oct 29, 2024	12 KB	⋮
algorithm_by_RF.h			B Boon Le	Oct 29, 2024	5 KB	⋮
algorithm.cpp			B Boon Le	Oct 29, 2024	12 KB	⋮
algorithm.h			B Boon Le	Oct 29, 2024	7 KB	⋮
max30102.cpp			B Boon Le	Oct 29, 2024	8 KB	⋮
max30102.h			B Boon Le	Oct 29, 2024	4 KB	⋮
RD117_ARDUINO.ino			B Boon Le	Oct 29, 2024	12 KB	⋮

Step 3: Press upload on the Arduino IDE and open the Serial Monitor. Ensure that the proper channel is selected (115200 baud).

Step 4: Follow the user prompt instructions to begin signal sampling!

**(2) How-to-Run ML Code:**

Step 1: Open the below .ipynb file in whatever notebook you are using (Python language)



ppg-model-glucose-level (5).ipynb



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Step 2: Select Run All Cells

Step 3: Follow user prompts to fill in relevant physiological data and obtain the blood glucose prediction!

### **(3) How-to-Run LED Signalling System:**

Step 1: Open the below file on Arduino IDE on Computer/PC

Name	Owner	Last modified	File size	⋮
 LEDclassification.ino 	 Boon Le	Dec 3, 2024	3 KB	⋮

Step 2: Compile the code and upload it to Arduino board

Step 3: Follow user prompt to input the blood glucose value in the Serial Monitor

Step 4: Observe a LED turn on!