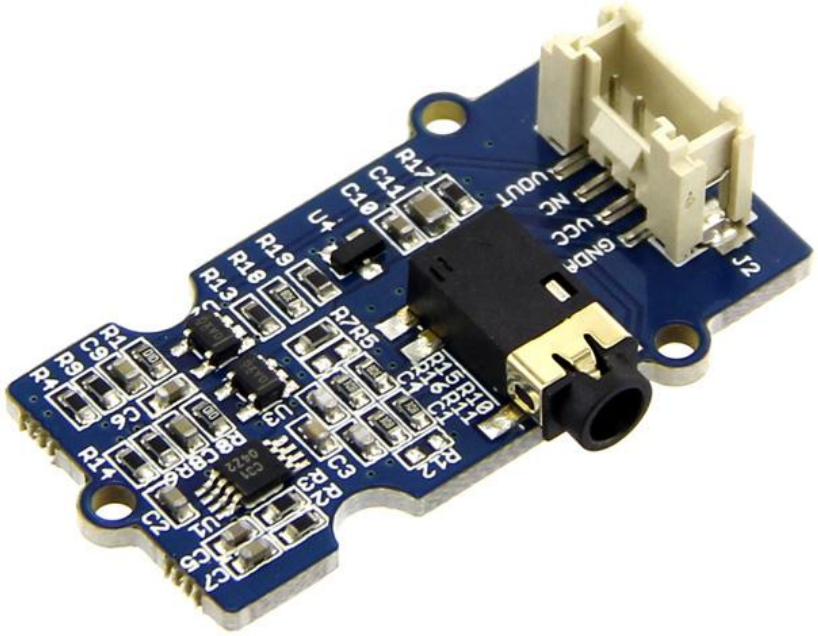
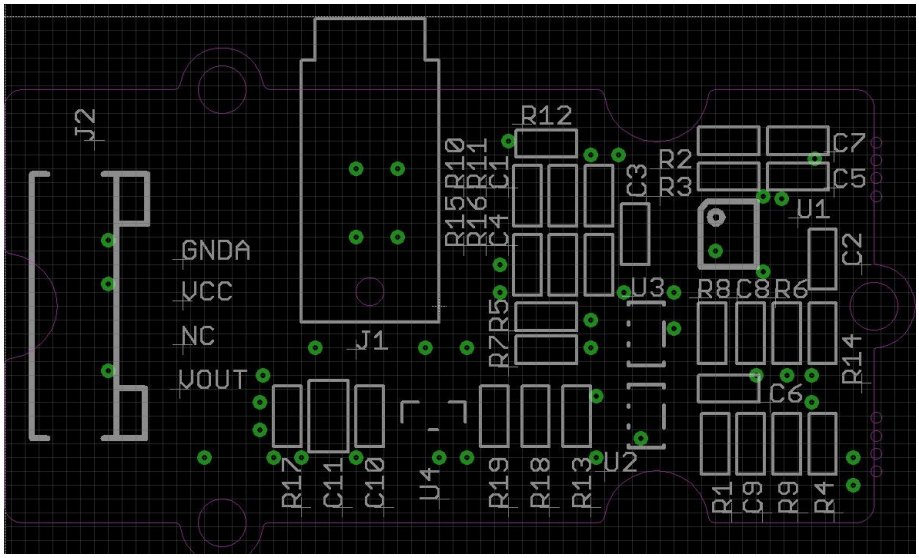
// Connections
// Wio Terminal :
// Grove - GSR sensor
// A0 ---------- Grove Connector
// Grove - EMG Detector
// A2 ---------- Grove Connector

1.- connect Galvanic skin response GSR sensor to WIO terminal

2.- connect EMG sensor to WIO terminal via the Grove male jumper conversion Analog sensor port

In standby mode, the output voltage is 1.5V. When a detected muscle is active, the output signal rises, and the maximum voltage is 3.3V. You can use this sensor in a 3.3V or 5V system.





J2: grove interface, connect to analog I/O;
J1: EMG Disposable Surface Electrodes connector.
U1: INA331IDGKT, difference amplifier.
U2, U3: OPA333, Zero drift amplifier.

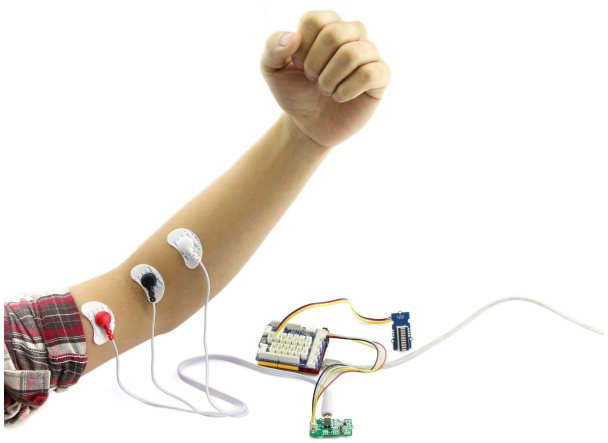
Plug Grove - Base Shield to

Seeeduino,

then connect Grove - LED Bar to D8,

connect Grove - EMG Sensor to A0.

Finally, tack the three electrodes to your muscle, and keep a distance between each electrode.



3.- calibrate GSR sensor adjusting the integrated resistor until the sensor generates 512 as output signal before wearing it

4.- Wio-Terminal-Getting-Started

https://wiki.seeedstudio.com/Wio-Terminal-Getting-Started/

Install Arduino IDE 1.8.19

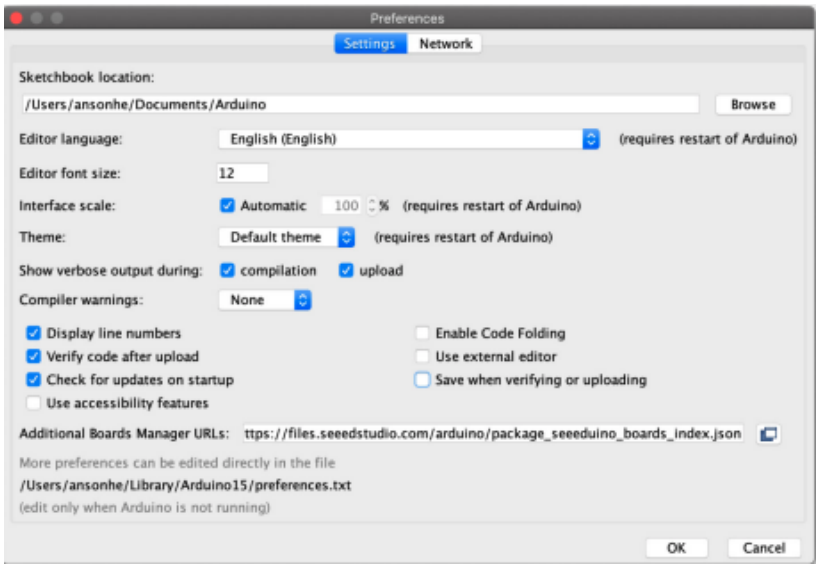
https://www.arduino.cc/en/software

5.- Add WIO Terminal Board Library

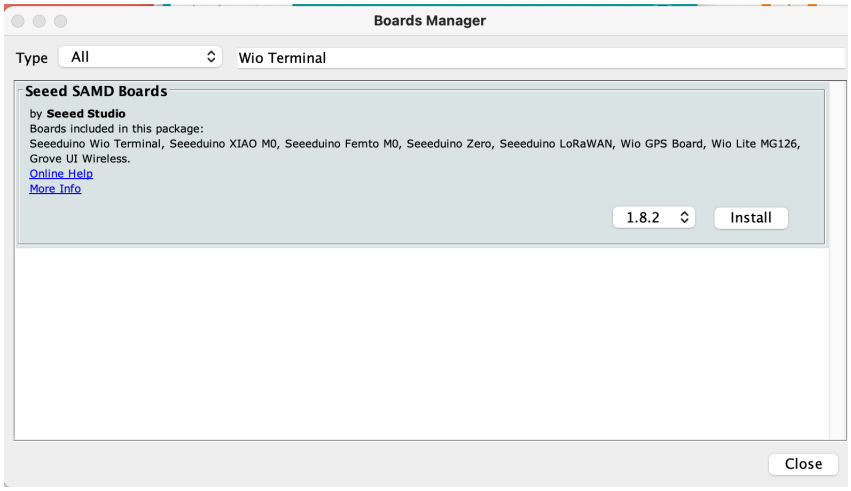
Go to Arduino | Preferences

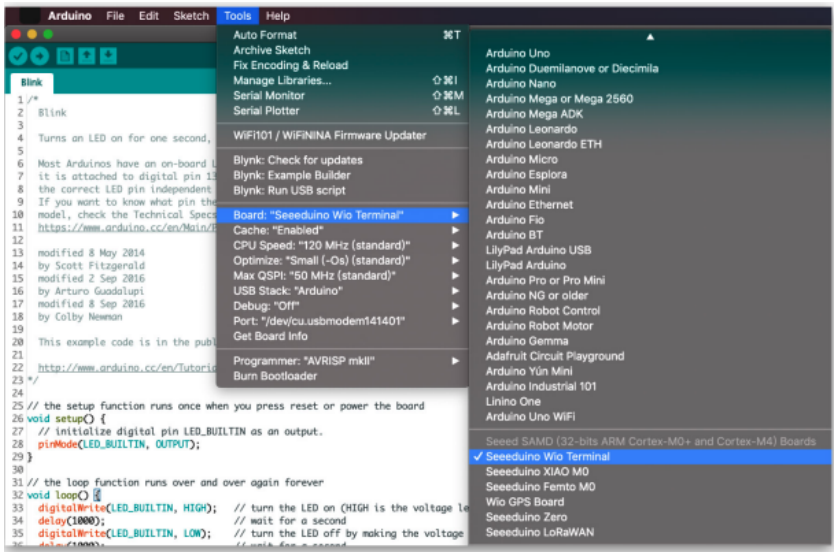
Additional Boards Manager URL:

https://files.seeedstudio.com/arduino/package_seeeduino_boards_index.json



To set up the Seeed SAMD Arduino Core, open the Arduino IDE, click Tools ➡ Board ➡ Boards Manager, and search for Wio Terminal in the search box. Then, install Seeed SAMD Boards

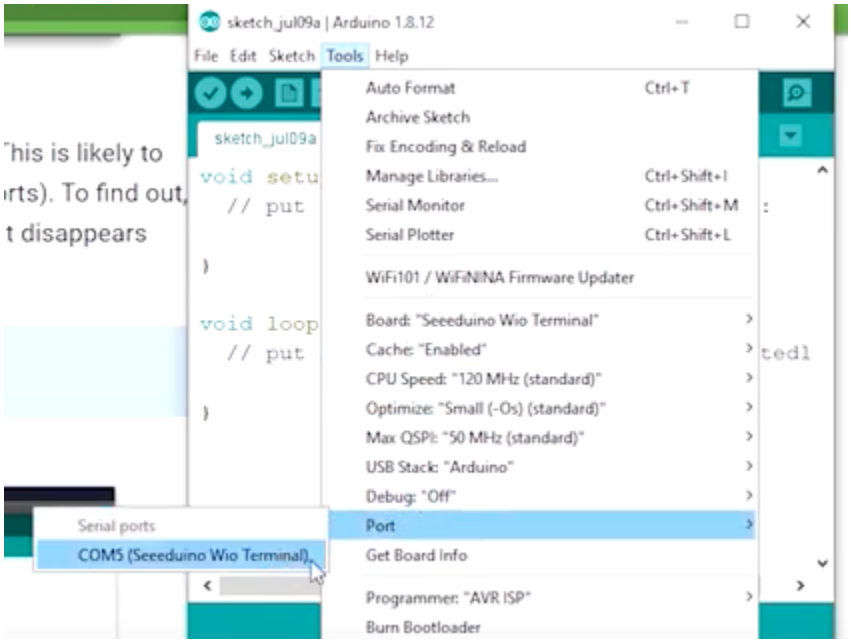




Select your board and port

You'll need to select the entry in the Tools > Board menu that corresponds to your Arduino.

Selecting the Wio Terminal



Note

For Mac Users, it will be something like /dev/cu.usbmodem141401

Upload the program

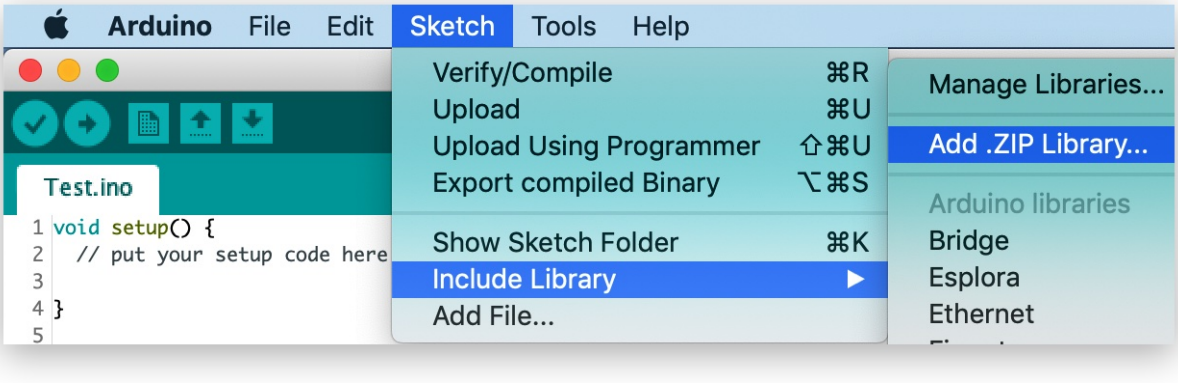
Now, simply click the Upload button in the environment. Wait a few seconds and if the upload is successful, the message "Done uploading." will appear in the status bar.

6.- Installing the SD Card library for Wio Terminal

Download the entire repo Seeed_Arduino_FS:

https://github.com/Seeed-Studio/Seeed_Arduino_FS

Open the Arduino IDE, and click sketch -> Include Library -> Add .ZIP Library, and choose the Seeed_Arduino_FS file that you've have just downloaded.



Install the Dependent SFUD Libraries

https://github.com/Seeed-Studio/Seeed_Arduino_SFUD

Seeed_Arduino_Linechart:

https://github.com/Seeed-Studio/Seeed_Arduino_Linechart