FSR Calibration Guide

Code Link: https://rice.app.box.com/folder/309621500583

Currently **voltageOutputV2** is the Arduino code, it is set up for the ble33 (3.3V setup)

SaveData.py is the python script to collect data

Documentation:

- FSR Spec Sheet: https://rice.app.box.com/file/1880907738716 -- FSR Datasheet
- Paper about calibration: https://rice.app.box.com/file/1880920811700 -- technique for conditioning

Voltage Divider Color Coding:

Red – 3 kOhm

Orange – 10 kOhm

Yellow – 30 kOhm

Green – 47 kOhm

Blue – 100 kOhm

Wiring:

- FSR – to 5V (or 3.3V) and Analog Input (A6 currently)
- Voltage Divider – to Analog Input (A6 currently) and ground

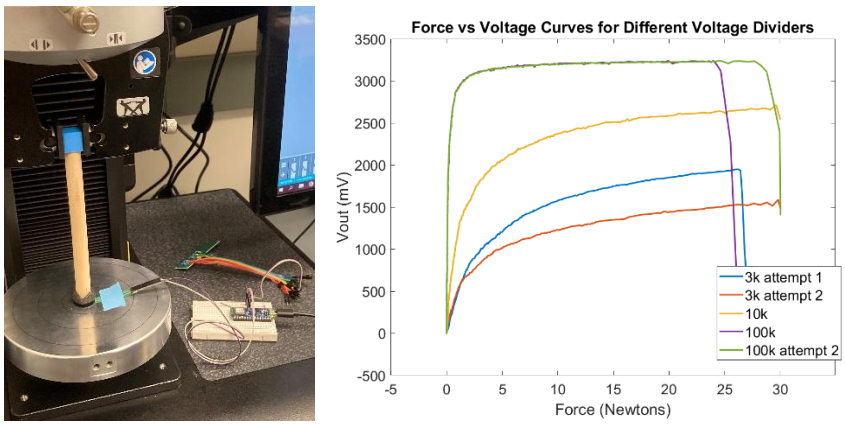

Figure 1: compression testing setup and resulting force voltage curves (syncing the force data from instron and the voltage data from the fsr – working on improving this)

Steps to Use:

1. Make sure the wiring is correct (correct voltage divider etc.)
2. Attach to computer, flash Arduino code (if not already done)
   *** When downloading the code, download the entire code folder***
3. Go to command prompt, navigate to python script location using ***cd Folder_Name*** and ***dir*** to see what is in the directory
4. Once you find SaveData.py, run the python using ***py SaveData.py***
   *** You may need to install python to your computer via the terminal***
5. Enter the com port (COM3) and press enter
6. It will ask what resistance and iteration, put the resistance and iteration value (this will create a filename)
7. Press **enter** to start collecting data
8. Press **space** to stop collecting data, it will prompt you with the same prompt as step 6
9. When you want to stop collecting data altogether, type ‘exit’ and press enter