

connections instead of making the connections with jumper wires. Our PCB design is shown in Figure 3.

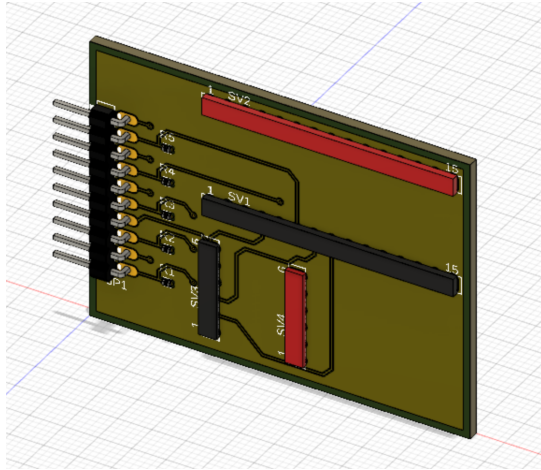


Figure 3: PCB 3D Model

However, in order to speed up our building and testing process, we decided to house the circuits on a protoboard. Although the protoboard is slightly bulkier, it allowed us to more quickly iterate on our design. The front and back of the protoboard is shown in Figure 4 and Figure 5 respectively.

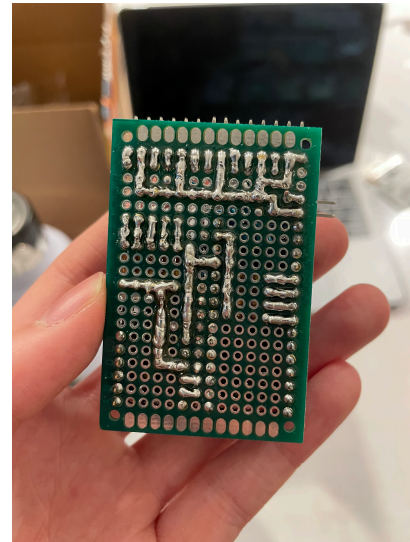


Figure 5: Back of Protoboard

The circuit for utilizing the flex sensors with the Arduino Nano is shown in Figure 6. A flex sensor acts as a variable resistor. Its resistance changes depending on how much it is bent. By putting it in a voltage divider circuit, the Arduino can then read the fluctuating voltage in between the resistor and flex sensor to detect how much the flex sensor is bending. Since the flex sensors need to be placed along the fingers of the glove, the protoboard simply has pinouts for the flex sensors to connect to as shown at the top of Figures 4 and 5.

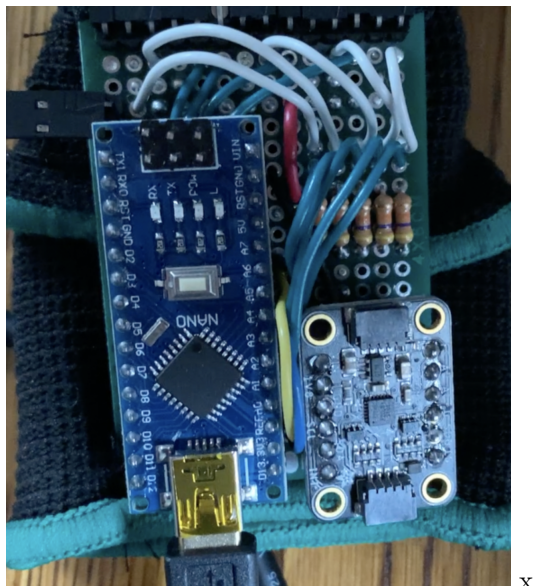


Figure 4: Front of Protoboard

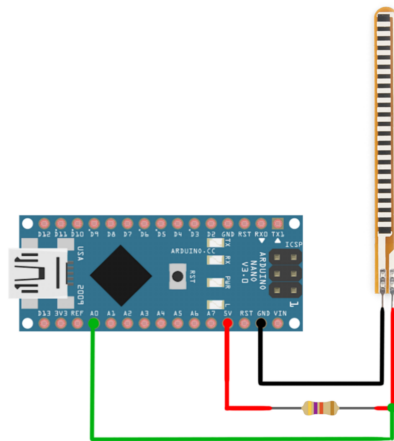


Figure 6: Flex sensor circuit and Arduino Nano connections

The circuit for utilizing the touch sensors with the Arduino Nano is shown in Figure 7. The thumb and index