

## Project 2 - Empathy Machines

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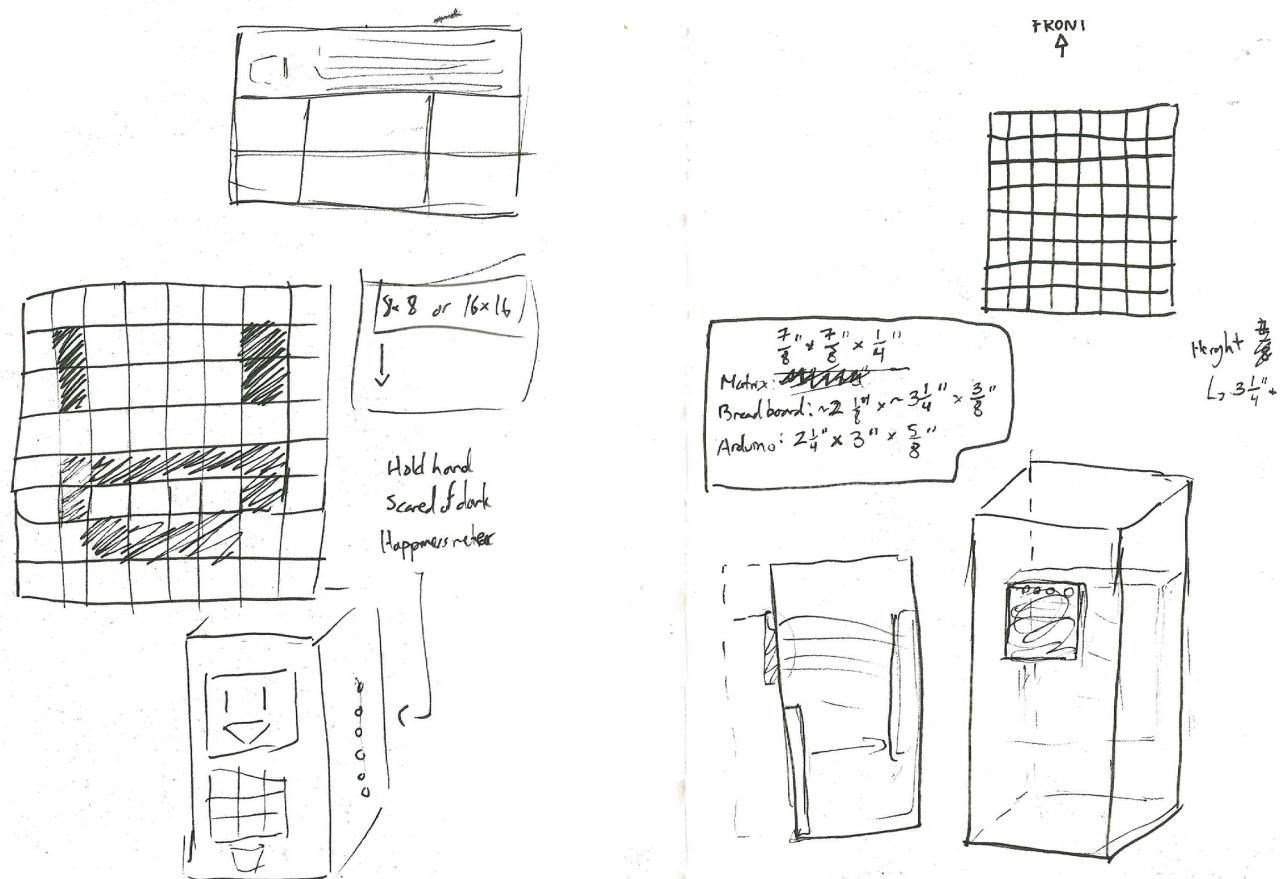
# Artistic Statement

With this project, we want to express the changing of emotions based on light. We intend to emulate the stereotypical “scared-of-the-dark” child. The emotions of fear and happiness are conveyed to the viewer through a computer screen. When the sensor is dark, the face on the computer screen becomes sad, and when exposed to light, the face becomes happy.

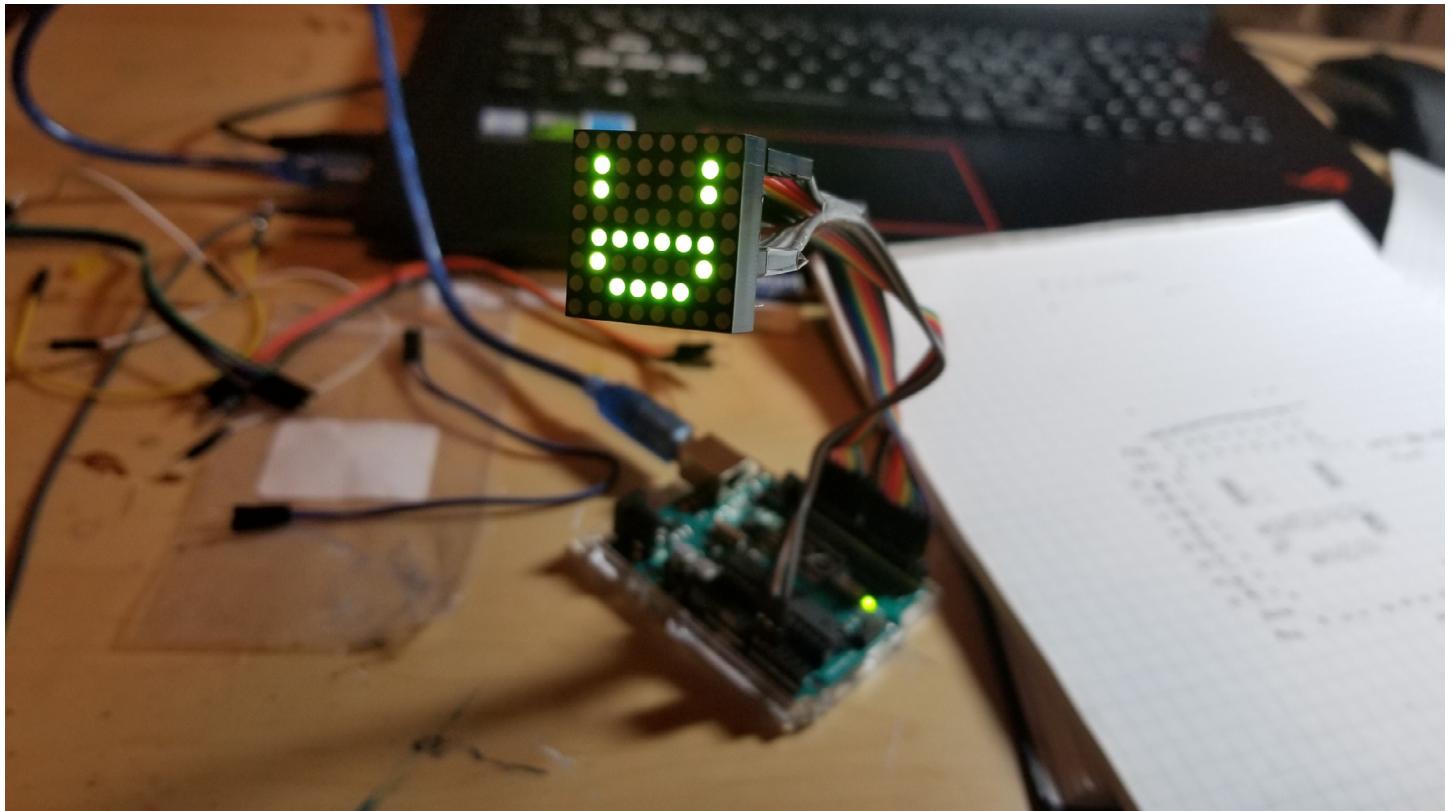
In addition, the project also explores sentience through animations. The face displayed on the computer screen blinks and is expressive, almost appearing alive and aware of its surroundings.

## Process

We initially decided to display the face through an LED matrix, and express emotions using it. Although we were able to successfully program the matrix, there was trouble when using M/F wires, as the connections would randomly shift, causing the matrix to be unpowered in certain areas.



*Sketches and concepts of how the matrix would be implemented*

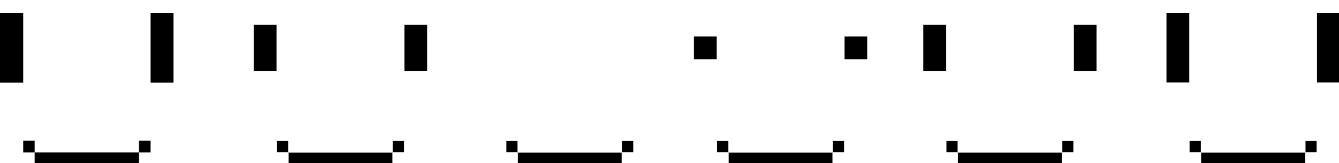


*The matrix connected through M/F wires*

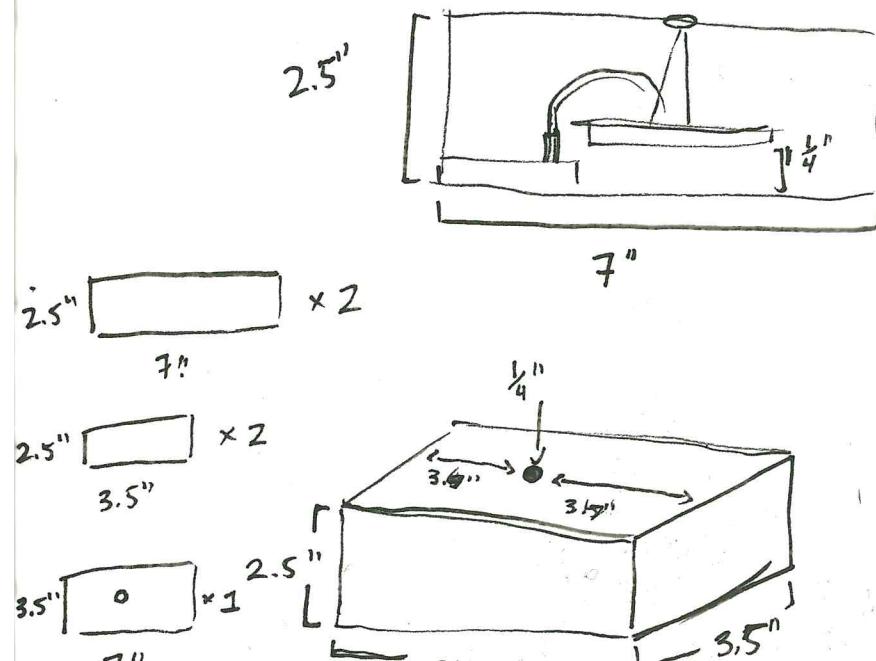
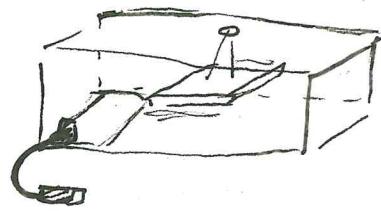
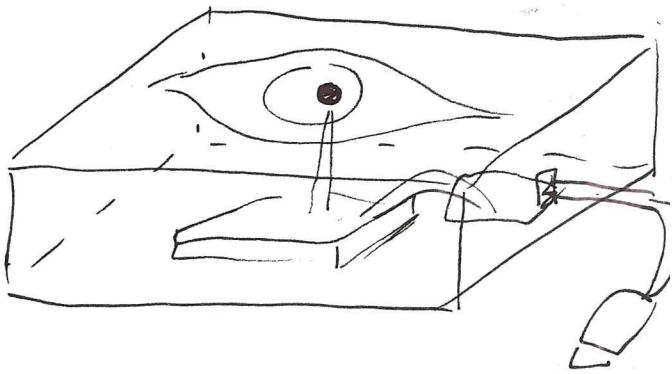
After deciding on the matrix to be unreliable and inconsistent, we turned to simply using the computer to be our primary display. We connected a light sensor to the arduino, and had the computer switch between different animations depending on the light level.



*Frames for the transition from sad to happy*

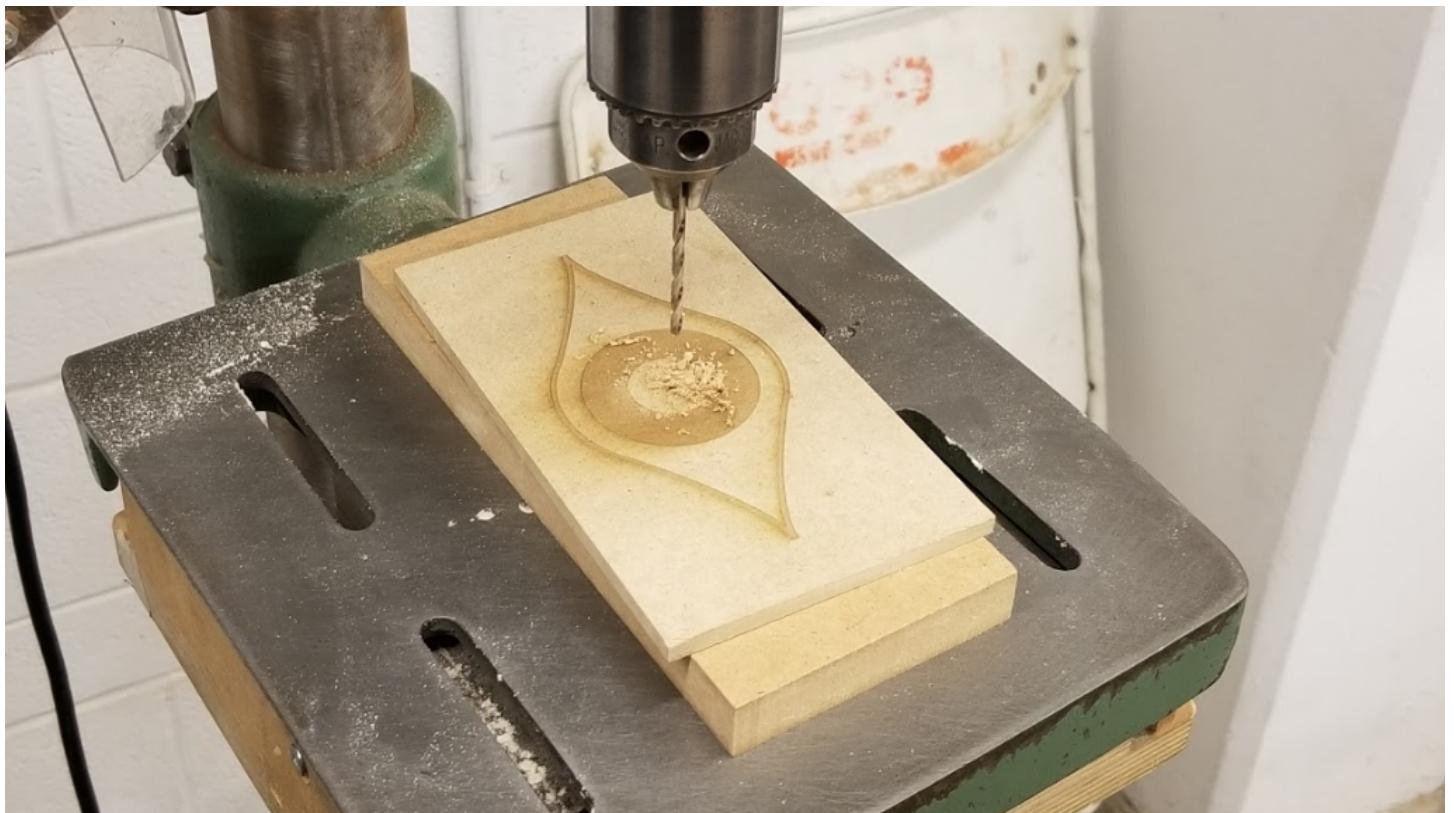


*Frames for the idle blinking animation while happy*

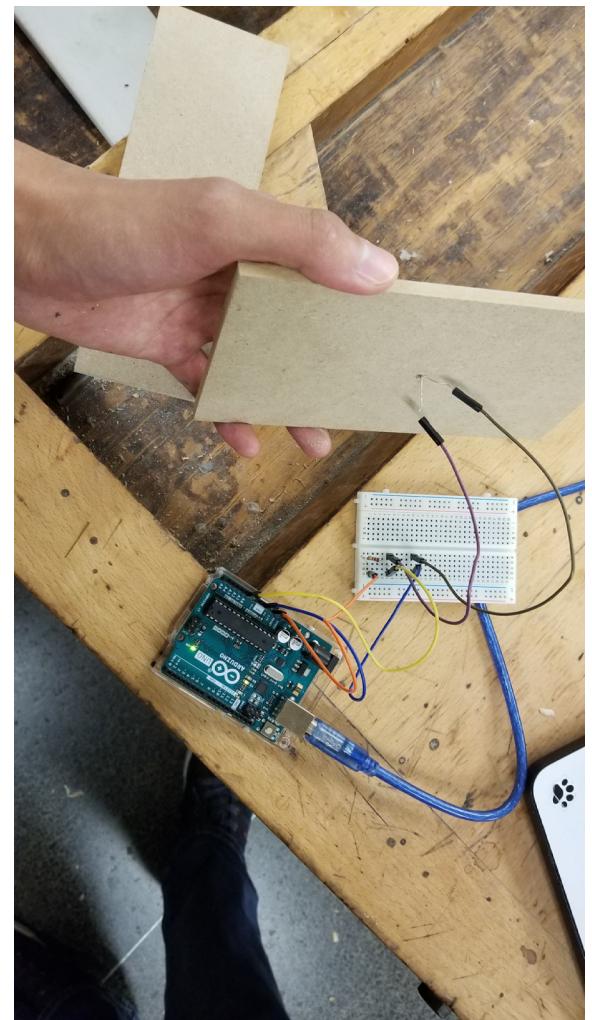
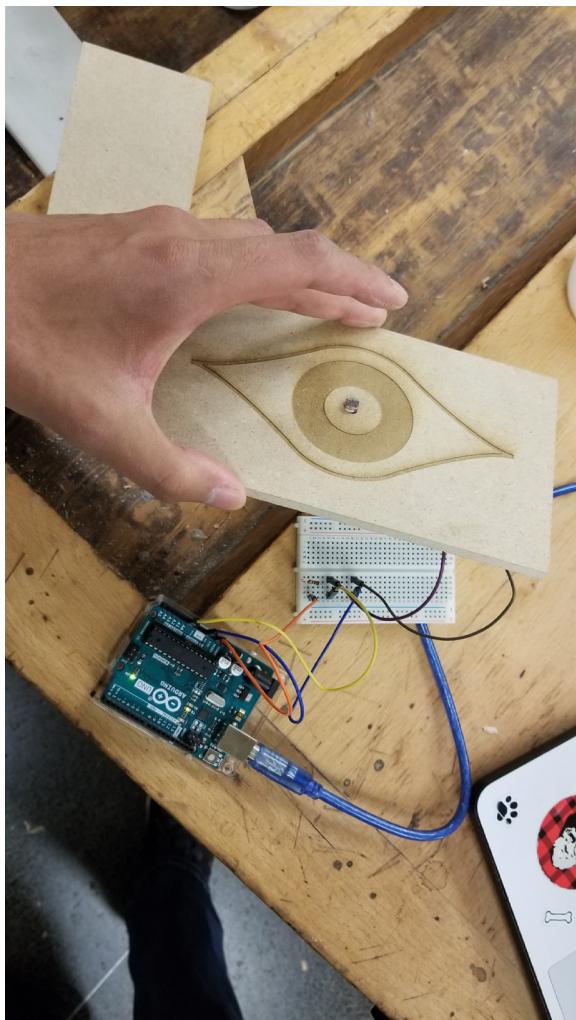


*Sketches and dimensions for the housing*

Once all the pieces had been cut, we laser engraved an eye-like shape on the top piece to symbolize the function of the photoresistor: receiving light. We then drilled a hole in the top piece so we could wire the photoresistor through it. After that, we assembled the box using hot glue.

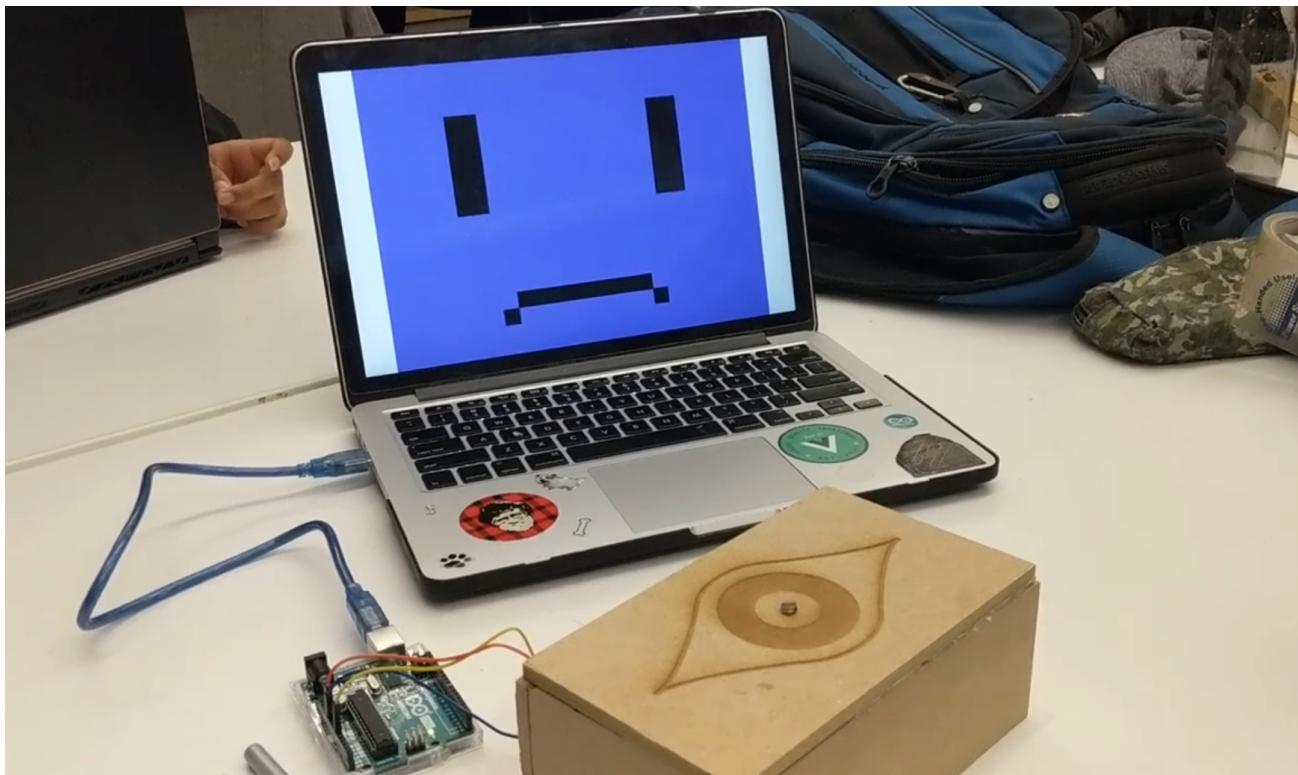
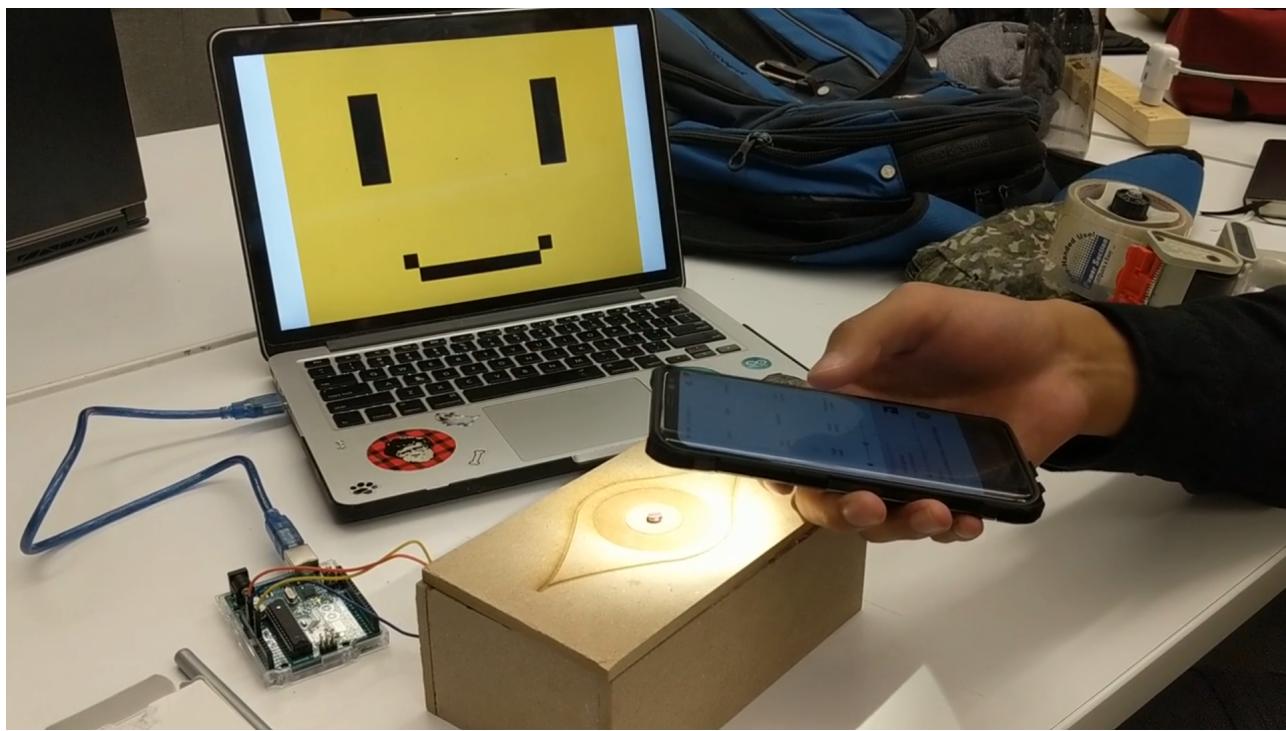


*Drilling a hole in the wood*

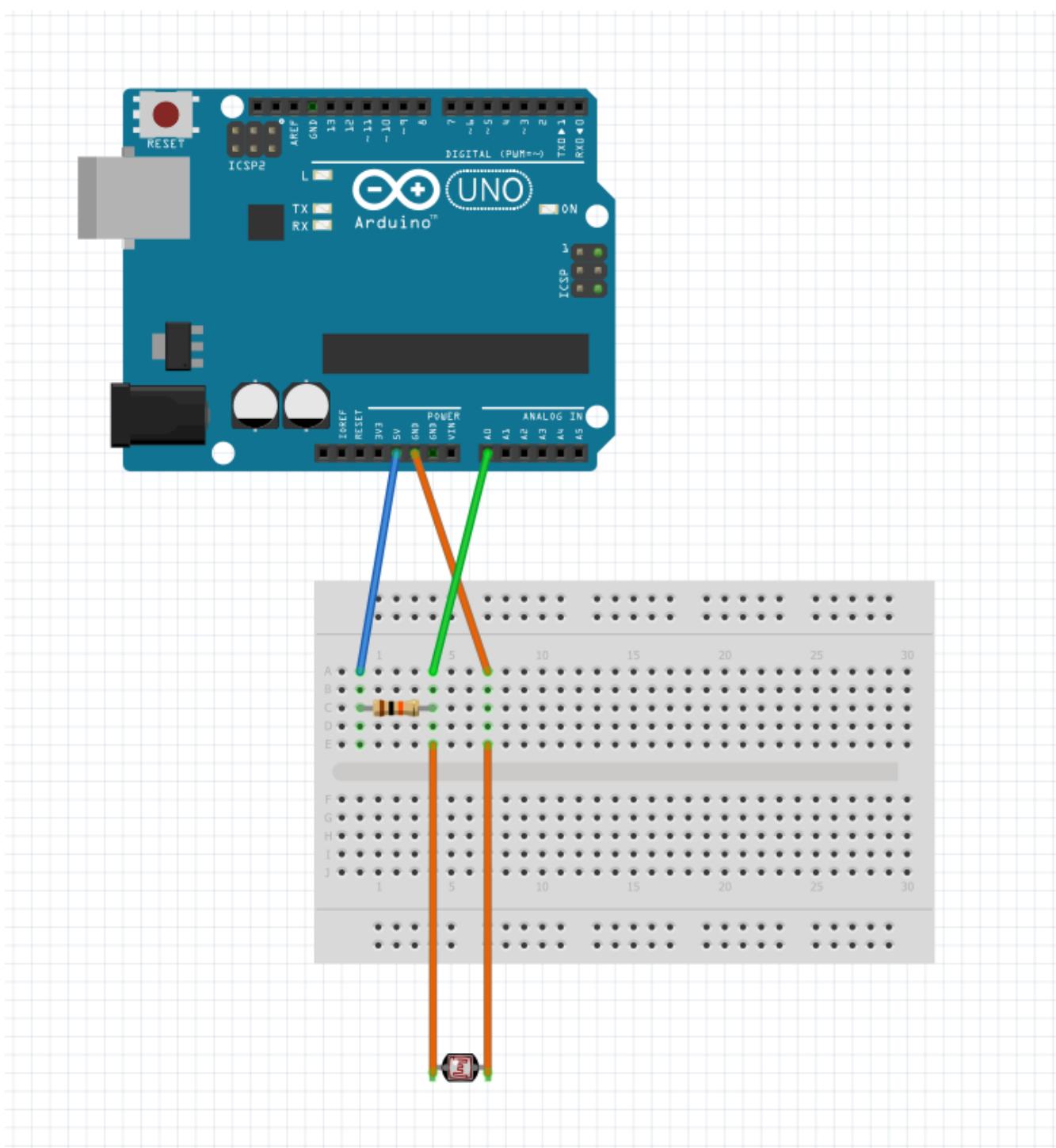


*Wiring the photoresistor using M/F wires*

# Final Product



# Circuit Diagram



## Links (Video + Code)

Video of working project: <https://streamable.com/g0pho>

Code: <https://github.com/JelaniThompson/arduinoemotions>