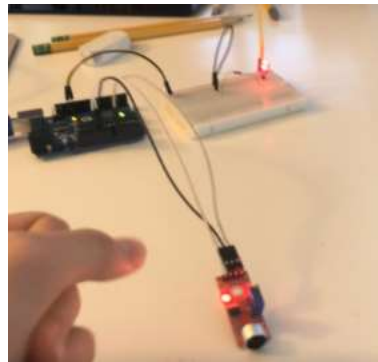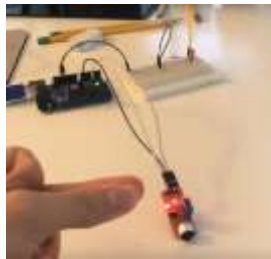# Joseph Lee

Electronics
Seattle, WA
Phone: (425)442-6621
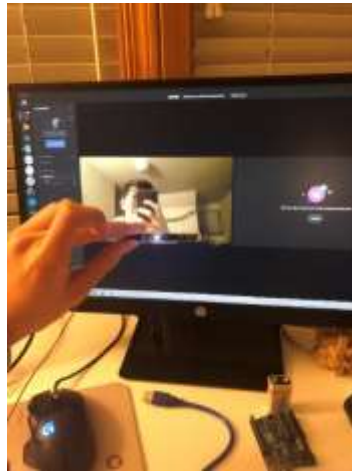Email: joslee22@uw.edu

Electronics Projects

Responsive LED

My very first electronics project. Using an Arduino, sound sensor, resistor, and LED along with simple code, I created an LED that turns on/off when you snap.

Addressable LED Lights

Using an Arduino and addressable LEDs, I was able to program how the lights would be displayed. This was also the first time I learned how to solder.
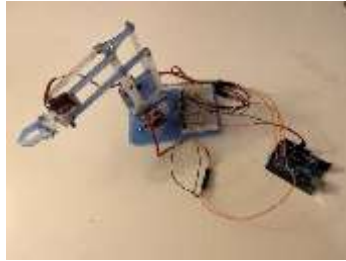
Salvaged USB Camera

I salvaged a front-facing camera from a broken laptop. Realizing that the camera uses the same four wires that a USB uses (P, G, D+, D-) I soldered the camera to a spare USB cable and was able to create a working USB camera.

Mini Programmable Car

With an Arduino, L298N motor controller board, as well as two stepper motors, I was able to create a programmable mini car.
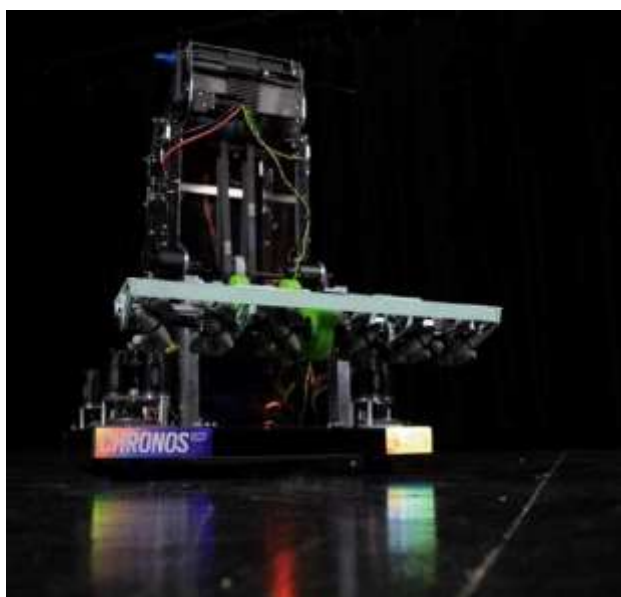
Robotic Arm

Using an Arduino and 4 servo motors, this robotic arm can be programmed with 180-degree thresholds as well as the ability to open and close the claw.
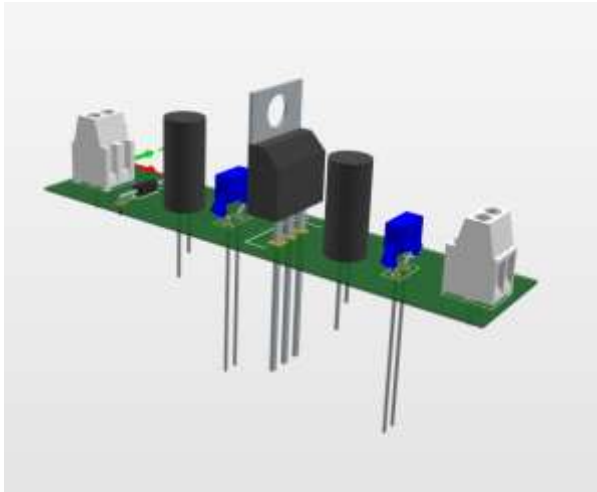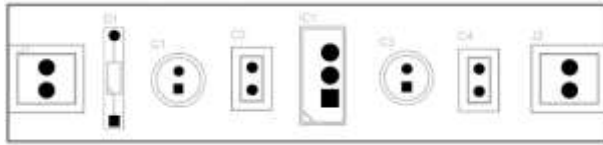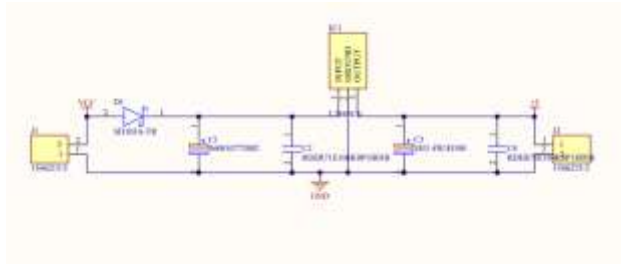

Installing a New Head Unit

My sister purchased an old RAV4. Rather than taking it to CarToys, I felt that I could do it myself to save money. I soldered the wiring harness we bought, installed a USB port in the cigarette lighter port, routed the wires from the rear of the car to the front, resulting in a completely functional radio with a backup camera and Apple CarPlay.

CHRONOS

Our award-winning robot ranked 4th in the Pacific Northwest that qualified for FRC worlds in Houston in 2022. As the Electronics Lead, I was responsible for the wiring and troubleshooting of our robot CHRONOS during meetings and competitions.

5V Regulator

Comprised of a diode for reverse polarity protection, two 0.10μF, a 0.22μF and a 10μF, to reduce noise from both the input and output along with a 5V regulator, this design was an entry point in ECAD.