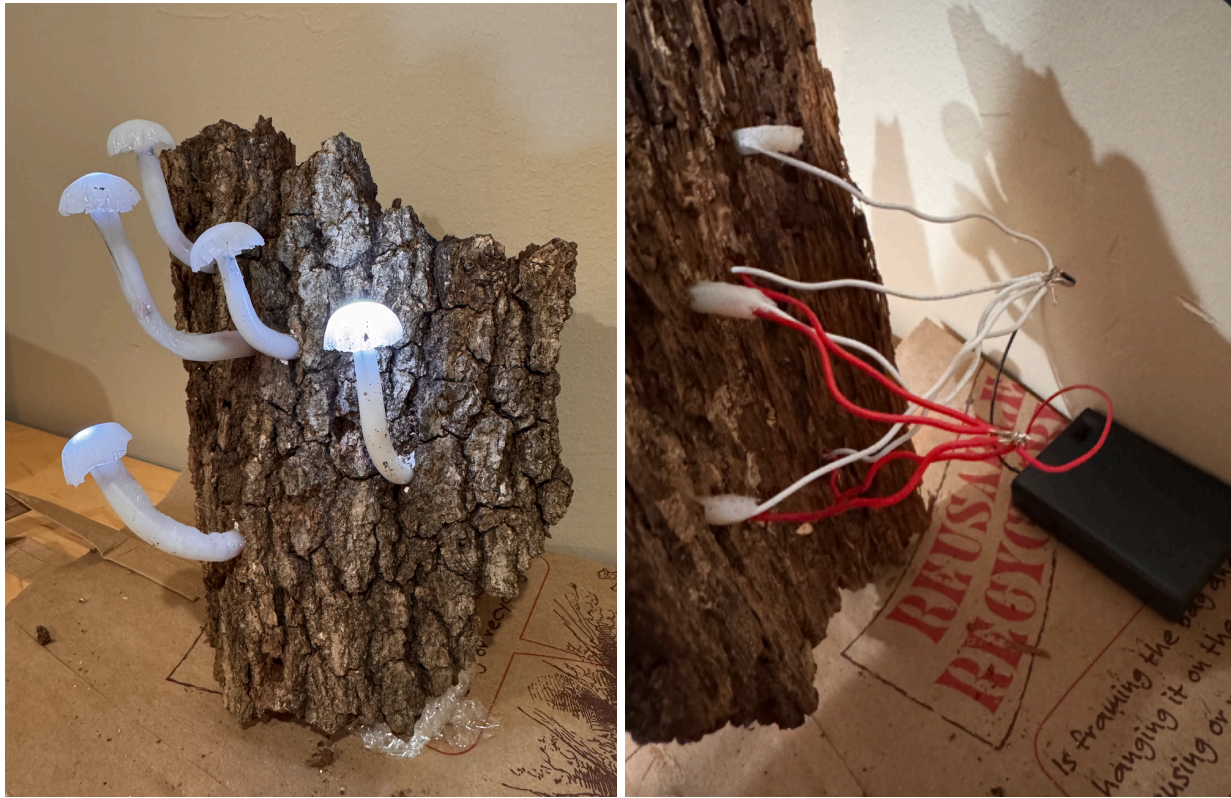


Mushroom LEDs

By Chloe Kim



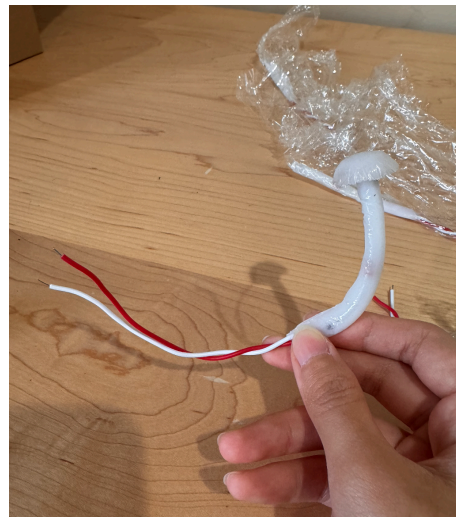
Showcase / Description of Finished Piece



For my final project I created these whimsical mushroom LEDs by following a tutorial from DIYPerks. The mushrooms themselves are made up of white LEDs soldered to a resistor and extra wire. I then applied clear silicone mixed with white paint around the wires and shaped the stems and caps using saran wrap. The end wires of the stems are then soldered to the wires of a battery pack so that they can be switched on. The resulting product is a couple of realistic-looking mushrooms that look awesome in the dark!

Process

	
Ideation/Design Process: I knew I wanted to create something fun, artistic, and aesthetic for my final project, as I felt that much of the semester I had spent learning the mechanics and “nitty-gritty” of Arduino. When searching for art projects I could make using components in an Arduino kit, I was more drawn towards projects incorporating LEDs to create something whimsical and playful. I then stumbled across DIYPerks’ video on how to make mushroom LED lights. I loved the look of the final product and how it added just a bit more fun to a room.	

**Prototyping/Building Process:**

I first had to gather all the materials needed for this project. Initially, I had purchased neopixels on a LED strip (seen in the left bottom picture), as the tutorial stated that these were the best LEDs for the mushrooms due to their wide and less concentrated beam of light. However, after spending a few days attempting and failing to solder and wire these LEDs, I realized they weren't the correct LEDs for my project. So, I switched to the simple white LEDs that had already come in my Arduino kit. I cut the plastic tips off the LEDs so that the beam of light they produced wasn't as narrow, and trimmed the legs off so that they could be soldered to a resistor and extra wire. After the wiring parts of the stem were complete, I moved on to making the stems look good. I did this by mixing clear, fast-drying silicone with white watercolor paint and shaped the silicone around the wires using saran wrap. For the mushroom caps, I placed a small dollop of silicone between two pieces of saran wrap and shaped this dollop around a ball of clay. I then attached the cap to the stem using a bit more silicone. Afterwards, I drilled holes in a hefty piece of wood I found outside, and threaded the wires of the

mushroom stems through these holes. Once the mushrooms were situated inside the wood as I liked, I soldered all the positive wires of the stems to the red positive wire of a battery pack and all the negative wires of the stems to the black negative wire.

Conclusion / Reflection

This was my first time soldering anything, so there was definitely a huge and unexpected learning curve for me as I attempted soldering all the wires of this project. Even though it was very difficult and frustrating at times to complete this piece, it was fun once I got the hang of soldering and it was very cool to be able to learn a new skill even at the end of the semester. If I had more time and more confidence in my skills, I would have loved to make these mushrooms interactive in some way, whether that be having them light up in different colors or having them turn on and off when the tops of the caps are touched. But overall, I'm proud of how my final piece came out and this project has definitely inspired me to see what other cool things I can make now using LEDs and soldering!

Links

Link to instructables page for the mushroom LEDs	https://www.instructables.com/Enchanted-Forest-Mushroom-Lights/
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Sources

DIYPerks	https://www.instructables.com/Enchanted-Forest-Mushroom-Lights/ https://www.youtube.com/watch?v=D5LjGFkpApw
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