

## Skills

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**Languages:** C, Assembly, MATLAB, Java, Python, HTML/CSS

**Platforms:** ESP32, STM32, Arduino, Unix, GIT

**CAD:** LTSpice, SolidWorks, OpenCV, Tesseract (OCR)

## Experience

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**Field Engineer Intern**, Magellan Midstream – Denver, CO 5/2022 – 8/2022

- Ensured terminal compliance with federal standards through site inspections
- Assisted in petroleum lab testing, sampling, and product quality verification

**Volunteer**, UAB Engineering Prototyping Lab – Birmingham, AL 8/2023 - 5/2024

- Worked in an Interdisciplinary Team of other student engineers to build an assistive device for individuals with disabilities
- Met weekly with the Alabama Department of Rehabilitation Services Engineers and patients to tweak and adapt the device

**3D Printing Lab Assistant**, UAB Libraries – Birmingham, AL 8/2022 – 5/2025

- Assisted patrons with CAD modeling for design & engineering projects meant to be printed on UAB Library's 3D Printing Lab

## Projects

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### [Autonomous Fire Extinguishing Robot](#)

- Senior design capstone project where my team built an autonomous mobile robot capable of putting fires out using thermal vision
- Uses a Raspberry Pi 4 to patrol a given area and search for heat signatures, then uses canned flame retardant to put out the fire.

### [IoT Plant Irrigation System](#)

- ESP32 Based Plant Monitoring/Watering System that uses the internet to monitor soil moisture and automatically water the plant with a pump
- Uses Arduino IoT Cloud and tracks soil moisture sensors to collect data

### [Low Vision Magnifier](#)

- Text Magnifier with 3D printable components for individuals with low vision disabilities using Raspberry Pi, OpenCV, Tesseract, and a webcam

### [Four-Bit Adder PCB](#)

- Worked and assembled a PCB in designed in Altium Designer that functioned exactly like a four-bit adder, with LED outputs and switch inputs.

## Education

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<b>University of Washington, Seattle</b>	M.S. Electrical Engineering	May 2027*
<b>University of Alabama, Birmingham</b>	B.S. Electrical Engineering	May 2025