

# Carlos Gonzalez

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## EDUCATION

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### Oregon State University

Bachelor of Science in Electrical and Computer Engineering  
Minor in Computer Science

Expected Jun 2022

## PROJECTS

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### IoT E-Ink Digital Display

Oct 2021 - Ongoing

- A low-power, electronic-ink display that updates information shown on the screen via WiFi
- Utilizes a website to allow users to update displays upon login.
- Currently the lead programmer in the team for the website.

### Swiss Army Spider

Jan 2021 - Mar 2021

<https://eecs.oregonstate.edu/project-showcase/projects/?id=WGMosxZwyqHGKAT5>

- A motorized system designed to move a payload over a letter paper at a minimum speed of 4 inches per second.
- Holds various tools such as a pencil, light sensor, and a Go Pro camera.
- Programmed 8 G-Code input commands to give the user more control of the system.
- Designed a GUI using Tkinter for users to input commands and view program calculations of the payload's movements.
- Implemented controller functionality to allow movement of the payload using joysticks.

### Frequency Detector

Sept 2020 - Dec 2020

- An Arduino circuit designed to listen to real-time musical notes and detects the frequency of the signal.
- Detects up to 8 different musical notes in the range of middle C to high C.
- Activates one of the 8 LEDs corresponding to the detected frequency of the audio signal.
- Processed and analyzed signals with the Fast Fourier Transform algorithm in MATLAB.

## SKILLS

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*Programming:* INTERMEDIATE: C/C++, Python, MATLAB