

# Aaron Vera

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## EDUCATION

### Texas A&M University

College Station, TX

Bachelor in Electrical Engineering, Minor in Mathematics

May 2024

- Major GPA: 3.044
- Cybersecurity Club Member

## EXPERIENCE

### CAD Designer Intern

Hughes Data Systems LLC | Corpus Christi, TX

May 2022 - August 2022

- Developed and engineered detailed 3D models and technical drawing using AutoCAD 2020.
- Enhanced model designs, securing a balance between cost-effectiveness and superior performance.
- Operated the 3D resin printer, assessing numerous designs and identifying optimal solutions through iterative testing.

### General Employee

Cage Nation USA | Corpus Christi, TX

May 2021 - August 2021

- Handled money transactions and interacted with customers to improve their experience.
- Performed routine maintenance and deep cleaning of a 5,000 square foot facility, ensuring hygienic and tidy public areas and restrooms.
- Completed nightly closures, including detailed cleaning, system shutdowns, and property lock-up, guaranteeing security.

### Web Developer Intern

Southern Sky Technologies | Corpus Christi, TX

May 2020 - August 2020

- Translated client requirements into creative and functional web designs, that perform on many different platforms.
- Remodeled webpages using design principles to improve visual appeal, while effectively conveying brand identity.
- Successfully integrated the back end of webpages to function and display seamless into the front end to optimize and enhance user experience and navigation.

## PROJECTS

### Smart Indoor Watering System

Sponsor: Texas Instruments • August 2023 - April 2024

- Engineered and implemented an interconnected smart indoor watering system for easy home plant management.
- Developed Python scripts and firmware to enable system automation, focusing on watering needs, email alerts and data TX/RX protocols, reducing system response to less than 30 milliseconds.
- Designed an SQL-backed web application for remote monitoring and control of the watering system, enhancing accessibility and convenience for users.

### Three Band Active Audio Equalizer

April 2024 - May 2024

- Developed an active tone control circuit capable of wide band frequency response (20Hz to 18kHz).
- Implemented bass, treble, and mid-frequency controls with a range of  $\pm 6\text{dB}$  adjustment, allowing for precise customization of audio output characteristics.
- Calculated cutoff frequencies for bass, mid, and treble controls, ensuring precise frequency response adjustments.
- Validated the circuit's performance through simulation and hardware testing procedures to confirm the achieved desired functionality and adherence to desired benchmark specifications.

## SKILLS

**Software:** AutoCAD, LTSpice, Multisim, Revit, Cadence

**Programming:** Python, C, C++, MATLAB, Java, PLC, JavaScript, PHP, SQL, Verilog

**Hardware:** Digital multi-meter, Raspberry Pi, Analog Discovery 2, Oscilloscope