Aaron Vera

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Education

Texas A&M University   **College Station, TX**

Bachelor of Science in Electrical Engineering, Minor in Mathematics   May 2024

- GPA: 2.94
- Cybersecurity Club Member

Skills

Software: AutoCAD, LTSpice, Multisim, Revit, Cadence
Programming: Verilog, C, C++, MATLAB, Java, Python, PLC, JavaScript, PHP, SQL
Hardware: Digital multimeter, Raspberry Pi, Analog Discovery 2, Oscilloscope

Work Experience

Hughes Data Systems LLC | Corpus Christi, TX   *June – August 2022*

CAD Designer

- 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 to product test various designs and determine the best solution.

Cage Nation USA | Corpus Christi, TX   *June – August 2021*

General Employee

- 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.

Southern Sky Technologies | Corpus Christi, TX   *June – August 2020*

Web Developer

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

Projects

Smart Indoor Watering System   Spring *2024*

- Developed and implemented an interconnected smart indoor watering system for easy home plant management.
- Integrated sensors into each potted plant to gather plant data, transmitting it to a central unit hosting an SQL database and web application.
- Utilized Python scripts to compare incoming sensor data with plant database values, enabling automated determination of watering needs, email notifications and handling data TX/RX signals.
- Designed a user-friendly web application for remote monitoring and control of the watering system, enhancing accessibility and convenience for users.

Three Band Active Audio Equalizer   *Spring 2024*

- Developed an active tone control circuit capable of wideband frequency response (20Hz to 20kHz)
- Implemented bass, treble, and mid-frequency controls with a range of ±6dB 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.