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**OBJECTIVE**

Full Time Position Focusing on Wireless Communication, Embedded System Design and/or Audio Engineering

**EDUCATION**

**Worcester Polytechnic Institute, Worcester MA, May 2022 *GPA 3.5***

Bachelor of Science in Electrical and Computer Engineering

**Tappan Zee High School, Orangeburg NY, June 2018**

**SKILLS**

**Engineering**: Project Management, Electrical Design, PCB Design(Eagle and Altium)

**Programming** **Languages**: C, C++, Verilog, VHDL, Python, MATLAB, adaptable to new languages

**Equipment**: Arduino, Teensy, Audio Consoles, OSC Networking, Exposure to ARM Processors

**Relevant Coursework**: Software-Defined Radio Systems and Analysis, Digital Circuit Design, Advanced FPGA Design, Computer Networks, Micro-Electronics, Introduction to Robotics, Various Computer Science Classes

**PROJECTS**

**Software Defined Radio Digital Television Transmitter/Receiver, WPI ISP, Spring 2021**

* Worked in a small team to develop a DTV Transmitter and Receiver using an ADALM PLUTO
* Utilized various specification documents to develop the transmit pipeline in python
* Began exploratory research into using the Zynq processor rather than the local pc

**MITRE Embedded Capture the Flag Challenge, WPI, January 2021 – April 2021**

* Competed on a 5 member team consisting of myself, 2 graduate students, 1 PhD candidate, and one Professor
* Developed a secure communication protocol while adhering to the provided design constraints
* Attacked other teams communication protocols testing for confidentiality, integrity, and authentication
* Applied classroom knowledge and research to develop the solution on an embedded platform

**Quadruped MQP Project, WPI, September 2020 – June 2021**

* Responsible for the design and implementation of the power system of the robot
* Designed and implemented a high speed communication protocol allowing for a distributed computing approach to the project
* Designed custom PCB for Encoders and Control Board Interface
* Developed hardware and low level code, wrapping the hardware level protocols

**“Lights Up, A Musical Cabaret” , WPI, Producer, March 2020 – October 2020**

* Produced a musical theatre production during the COVID-19 pandemic
* Adapted the format of the production multiple times throughout the planning and execution, as circumstances changed, insuring all 45 participants stayed engaged
* Collaborated with administration to create an approved safety plan, allowing the production to proceed in the adapted format
* As quoted in Shining a Light on WPI Theatre - “Lights Up saw students performing while wearing face coverings and with a barrier separating them from those who were working on behind-the-scenes tech. Each performance was shot separately; those that look like two students are sharing space were filmed asynchronously for safety and then superimposed in post-production. After months of adjustments, planning, and out-of-the-ordinary rehearsals, the show was streamed on VOX’s website for the first weekend in October”

**FIRST Robotics Tappan Zee HS, Founder and Captain, September 2017–August 2018**

* Established and lead a FIRST robotics team comprised of over 50 members
* Insured proper allocation of funds in excess of $30,000 based upon the team’s goals

**CyberAuto Challenge, Warren Michigan, July 2017**

* Researched real solutions to the challenges posed by cybersecurity in automobiles

**WORK EXPERIENCE**

**Wireless Communications Intern, SHURE, Niles IL, Summer 2021**

* Worked on the FPGA team across multiple projects
* Continued development of a telemetry system to debug development hardware
* Increased efficiency of python API to allow real time parsing of data
* Developed real time visualization of signal data utilizing the API
* Began development on FPGA based serial bridge between hardware and telemetry system

**Project Engineer, Bertussi’s Plumbing and Contracting, Pearl River NY, Summer 2020**

* Helped manage multiple simultaneous multi-million dollar school renovation projects
* Facilitated communication between the field crews, office staff, and architects
* Developed RFIs for contract clarification
* Worked with manufacturers to write submittals defending the use of alternative equal products
* Learned the mechanical industry to be able to convey information concisely and accurately

**Audio Engineer, Freelance, Blauvelt NY, Worcester MA, May 2014 – Present**

* Developed and installed audio setups for performances of various sizes
* Became confident in my ability to learn and install new equipment and systems quickly

**Audio/Lighting and Technology Intern, PRG Secaucus, Secaucus NJ, Summer 2019**

* Assisted in building and coordinating RF racks for wireless microphones
* Evaluated functionality of equipment returned from events, to determine issues and confirm nominal performance
* Investigated various networking protocols interaction and made design recommendations for the show’s critical networks

**Counselor, Blue Rill Day Camp, Airmont NY, June 2015- June 2018**

* Collaborated with senior staff to develop activities and ensure the safety of 22 young campers
* Awarded “Shining Star”, counselor of the year award for mentoring younger staff members

**COMMUNITY INVOLVMENTS**

**VOX Musical Theatre**, September 2018 - Present

**President**, January 2021 - January 2022

**Technical Director**, January 2020 - January 2021

**COVID-19 Safety Committee Chair**, August 2020 - November 2020

**Active Member**, January 2019 – Present

**Skull Senior Honor Society**, November 2020 – Present

**Inductee**, November 2020 – August 2021

**President**, August 2021– Present

**Lens and Lights**, September 2018 - Present

**Active Member**, January 2019 – Present

**MASQUE Drama Theatre**, September 2020 - Present

**Member**, September 2020 - Present

**Underwater Hockey**, September 2018 - Present

**Secretary,** January 2019 - January 2020

**Member,** September 2018 - Present

**AYO Theatre Honor Society**, November 2020 – Present

**Active Member**, November 2020 – Present

**SOCSD Food Pantry**, Orangeburg NY, January 2021 - Present

**Volunteer,** January 2021 - Present