**EDUCATION**

**The University of Scranton Expected May 2023**

B.S., Computer Engineering and B.S., Computer Science, GPA: 3.83

**EXPERIENCES**

**HamSCI Personal Space Weather Station -** *FPGA Developer* **May 2021 – Present**

* Design of the TangerineSDR, a high-performance low-cost radio receivers for scientific research.
* Programming, testing of the FPGA that facilitates remote system upgrade, the data processing (ADC, filters, etc.) and communication (SPI, I2C, UART, Ethernet) between hardware components.
* Programming of the soft core NIOS processor that sets up the networking with local computer and remote servers
* Worked with scientists, engineers, and hobbyists from every continent.
* Volunteer at physics summer camps for local high school students to inspire their interest in physics and advanced radio technology

**University of Scranton -** *Technical Consultant* **February 2020 - Present**

* Supporting faculty in learning management software
* Developing websites for internal statistics, data analysis, and faculty personal information

**PROJECTS**

**NASA RockOn Spring 2022**

* Project leader in the assembly of a payload that was launched into space aboard a sounding rocket
* System recorded the following physical parameters during flights: speed, acceleration, orientation, temperature, humidity, radiation

**Bluetooth-Activated Micromouse Fall 2019 - Present**

* Project leader of an engineering project that designs a robot capable of autonomously traversing the maze upon a Bluetooth-transmitted command from users.
* The Arduino microcontroller runs a high-level algorithm that almost always navigates the robot on the shortest path during the first run. The microcontroller also controls the motor to prevent jitters in movements.

**Automated Slide Stainer Fall 2021 – Present**

* Facilitation of immunohistochemistry-based cancer research via research-friendly and cost-effective laboratory instruments using stepper motors, electromagnets, ESP32, Bluetooth mobile app, and so on.
* Immunohistochemistry involves the selective identification of antigen expression in a biological sample.

**WWV Signal Timing Analysis:** studying the effects of upper atmosphere on transmitting radio signals

**Academic Question Generator**: a web-based academic tool that generates randomized questions in many subjects.

**Touchless Hand Gesture Garage Opener**: a group project that produces a wireless universal device which performs multiple operations with any garage upon hand gesture commands.

**SKILLS**

**HDL:** Verilog, Platform Designer, ModelSim, Quartus.

**Software:** machine learning, data structures and algorithms,Python, MATLAB, C, C++, Assembly, Git, kernel, Linux, WSL, SSH, GPU acceleration, raytracing.

**Hardware:** FPGA, microcontrollers (Arduino, ESP32, PIC), embedded systems, control systems, communication systems, PCB Design, circuit design, THT and SMT soldering.

**LEADERSHIP AND ACADEMIC HONORS**

Institute of Electrical and Electronics Engineers (IEEE) | President **Spring 2020 – Present**

Eta Kappa Nu Engineering Honor Society | Vice-President **Fall 2020 – Present**

The University of Scranton | Liva Arts Company, Musical Co-Director **Spring 2020**

The University of Scranton | Dean’s List **Fall 2019 – Present**

Sigma Pi Sigma Physics Honor Society **Fall 2021 – Present**

Upsilon Pi Epsilon Computing Sciences Honor Society **Spring 2022 – Present**