

---

**EDUCATION****San Jose State University**

GPA: 3.78

Master of Engineering, Electrical Engineering : Expect Dec 2024

**The City College of the City University of New York**

GPA: 3.44

Bachelor of Engineering, Electrical Engineering : Dec 2019

Minor in Computer Science : Dec 2019

---

**RESEARCH & ACADEMIC PROJECTS****Inference Engine Based on Logarithmic-Based Arithmetic**

09/2023 – 12/2023

- Designed and implemented a logarithmic arithmetic-based inference accelerator using Xilinx Vivado HLS for a (1,4,3) logarithmic representation (sign bit, 4-bit integer, 3-bit fraction).
- Developed a forward data path featuring Multiply-Accumulate (MAC) units and ReLU activation functions.
- Generated performance and resource graphs, compiled with Xilinx Vivado HLS.
- Detailed insights and results in a comprehensive report, showcasing proficiency in neural network design, optimization, and Xilinx Vivado HLS.

**Image Processing functions on PYNQ FPGA board using Verilog**

09/2023 – 12/2023

- Developed an image processing algorithm and implemented it on an FPGA to improve image resolution by 20%.
- Utilized Verilog HDL to program the FPGA and optimized data flow for efficient processing.
- Leveraged line buffering and multiplexing techniques to address challenges of non-streaming image data on FPGAs.
- Successfully achieved project goals, demonstrating strong skills in image processing, FPGA programming, and hardware design.

**Neural Network – Machine Learning**

02/2019 – 12/2019

- Implemented general Artificial Neural Network (ANN) and Convolutional Neural Network (CNN) using the C++ programming language, aimed at educational applications.
- Facilitated the development of a compact and versatile neural network library, contributing to its enhancement for broader educational use.
- Played a key role in data collection and analysis for evaluating the performance of the trained neural networks.

---

**EXPERIENCE****Automation Test Engineer at Intel – Contractor**

10/2021 – 02/2023

- Build/develop new test scripts and maintain a scalable automation framework in the customer validation space for validating NVMe SSDs.
- Created, defined, and developed validation environment and test suites using Python, Bash, and PowerShell by understanding requirements of a customer with emphasis on environment and product features.
- Develop robust automated test flows to validate a new OCP 2.0 SSD feature in a short time which enabled other teams to increase validation coverage and fix critical bugs before releasing to the customers.
- Maintained repositories on GitLab.

**College Lab Technician at LaGuardia Community College**

10/2018 – 05/2021

- Assist instructor to set up lab experiments
- Guide students to conduct experiments, collect and analyze data
- Perform quality control and calibrate equipment if necessary
- Maintain equipment in proper working order and maintain a clean work area
- Practice safe work habits, including complying with all safety, health, and environmental rules and regulations
- Design, debug, troubleshoot electronic circuits and ensure reliability of designs in the lab.

---

**SKILLS****Programming Language:** C++, Python, Verilog, System Verilog, MATLAB**Scripting Language:** Python, Bash, Powershell, TCL**Design Software:** MATLAB, Multisim, AutoCAD, Vivado, Vitis HLS, Synopsis VCS**Familiar with:** Linux, Windows, Jira, Git

---

**RELEVANT COURSES**

Reinforce Deep Learning

Convolution Neural Network

Digital Design for AI and DSP

Logic Verification with UVM

Reinforcement Learning Multi-Robot Networks

Digital System Design-Synthesis

Linear System Theory

SoC Design &amp; Verifi. with System Verilog

Computer Vision