Allan Howe

Previously held secret security clearance

Provo, UT — (571) 296-2821 — allandavidhowe@gmail.com — linkedin.com/in/allandhowe

Electrical & Computer Engineering M.S. student with strong skills in embedded development, FPGA design, and AI/ML deployment. Seeking roles in embedded software or FPGA development.

Education

Brigham Young University — Provo, UT
M.S. Electrical and Computer Engineering, GPA: 3.76 — *Expected June 2026*
B.S. Computer Engineering, GPA: 3.92 — *April 2024*

Technical Skills

Software: C, C++, Python, CUDA, Java, Assembly, ROS, CMake, Bash, Git, Linux
HDL: SystemVerilog, Verilog, VHDL, TCL, HLS, ModelSim, Vivado, Vitis
AI/ML: Model design, training, Frameworks (PyTorch, TensorFlow, ONNX), model quantization

Experience

Research Assistant — Provo, UT
Brigham Young University, Configurable Computing Lab — *January 2025 – Present*

- Trained and deployed an ML model on a heterogeneous embedded SoC, partitioning workloads across PL, PS, and AI engines, in a Linux environment reducing power usage by 10x compared to a GPU
- Developed test scripts to execute an ML model under radiation, ensuring hardware reliability and capturing critical performance data

CEO / Embedded Systems Engineer — Provo, UT
Qwell LLC — *January 2023 – Present*

- Founded and led an IoT device startup, owning end-to-end system development including C++ development (WiFi, BLE, and motor control), PCB hardware design, enclosure integration, web design, and cross-platform app development
- Recognized with BYU Student Innovator of the Year award honorable mention

Embedded Software Intern — Fairfax, VA
InPhase Research — *May 2023 – August 2023*

- Developed a bare-metal I^2C temperature sensor driver in C to validate test equipment used extensively for circuit board thermal tolerance testing
- Reverse engineered and debugged an ultra-wideband (UWB) chipset by probing the hardware using a logic analyzer to inform integration into future products

Software Engineer Intern — Roy, UT
Northrop Grumman — *June 2022 – August 2022*

- Built an inventory tracking software, which reduced lookup time for equipment from several minutes to a few seconds, achieving a 60x speed-up
- Developed a user interface and web app to streamline test scheduling across multiple teams in the company, replacing a disorganized process