

Trot Davis (He/Him) Electrical Engineering Student

Vancouver, British Colombia

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[LinkedIn](#) [Website](#)

TECHNICAL SKILLS

Electrical

- PCB Design
- FPGA boards
- Circuit/Schematic Design & Component Analysis
- SMD and THT Soldering
- Oscilloscope, Signal Generator, Microcontrollers, Multimeter, Basic Circuit Tools

Programming

- C
- C++
- Assembly
- Verilog
- G code
- Arduino
- Embedded Programming

Software Tools

- AutoCad
- Altium Designer
- Quartus
- ModelSim
- MATLAB
- Git & Visual Studio
- SolidWorks
- Excel

EDUCATION

University of British Columbia
Bachelor of Applied Science - Electrical Engineering

Expected April 2027

Relevant Coursework – Multivariable Calculus (91%)

TECHNICAL WORK EXPERIENCE

Mirmil Products, Campbellford, Ontario
Production Associate

May 2024 – August 2024

- Operated a Computer Numerical Control (CNC) machine to produce parts for large corporations
- Analyzed professional engineering drawings and cut sheets designed on AutoCad and suggested improvements to make on-site assembly and material usage more efficient.
- Revised and enhanced G code programs, effectively lightening the workload of the Mechanical Engineering Technicians and increasing productivity by **25%**.
- Collaborated effectively with a team of multidisciplinary engineers, enhancing strong interpersonal and communication skills.

TECHNICAL PROJECTS

PBC Business Card, Personal Project

December 2024 – Current

Altium Designer, Schematic Design, Gerber Files, SMD Soldering, NFC Programming, RLC Circuit

- Creating a PCB business card that utilizes NFC technology to transfer a LinkedIn profile URL to a phone as a unique way to share contact information at job fairs or recruitment programs.
- Generated an antenna with sufficient inductance to ensure the business card resonated at the NFC's frequency.
- Optimized the antenna's geometry using calculations modeled in Excel.
- Fabricated the schematic and PCB libraries for the NFC tag and antenna in Altium Designer.
- Designed the electronic schematic for the RLC circuit, and currently placing the parts on the PCB's 3D layout.
- Currently preparing the Gerber files to send for PCB to be fabricated.



RISC Machine, School Project**October 2024 – December 2024***System Verilog, FPGA Board, Digital Logic, Finite State Machines, Modelsim, Quartus*

- Programmed the Datapath in Quartus and made a testbench in Modelsim to ensure register selection and arithmetic were functioning properly.
- Developed a finite state machine that decoded an instruction, and sent the decoded instruction to the Datapath so the user could easily send and receive information.
- Added Read-Write memory to complete the fully functioning model of the CPU.
- Uploaded the compiled Quartus project onto a DE1-SOC and demonstrated that the program could read and write registers into memory after arithmetic operations were performed via the switches and buttons on the board.

Arcade Claw, School Project**January 2024 - March 2024***Arduino, C++, Circuitry, AutoCad, Engineering Drawings*

- Collaborated with a team of multidisciplinary engineering students to design an arcade claw using 4 aluminum metal sheets, along with various tools.
- Spearheaded the coding portion of the assignment, creating a program for the Arduino with a sensor detecting its distance to the ground. When a certain threshold distance was met, it powered the servo motor which closed the claw.
- Assembled the circuitry required on top of the claw to communicate properly between the sensor, Arduino, and servo motor.

HOBBIES

- Hockey
- Golf
- Video Games
- Music

