Jared Gendron Electrical Engineer

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SKILLS & QUALIFICATIONS

- Great experience with building, prototyping, and troubleshooting electrical circuits using lab tools such as an oscilloscope, DC and three-phase power supplies, and soldering equipment
- Fast learner capable of programming in Python, C, C++, Assembly, SystemVerilog, VHDL, Java, Swift
- Highly software efficient with experience using MATLAB, Excel, SolidWorks, AutoCAD, LTspice, Quartus, ModelSim, GitHub and Linux based command-lines
- Experience with scripting in Python such as collecting serial data from external inputs for testing

EDUCATION

University of British Columbia **Expected May 2023**
Bachelor of Applied Science in Electrical Engineering

University of the Fraser Valley **Sept 2016 – April 2019**
Pursued Bachelor of Science (transferred to UBC)

RELEVANT EXPERIENCE

IoT Digital Parking Sign, *UBC Parking and Access Services* **Dec 2021 – Present**

- Collaborated closely with a client to successfully conceptualize, design, and develop an innovative digital parking sign that dynamically adjusts its display based on real-time data.
- Demonstrated leadership by overseeing the entire project lifecycle, from requirements gathering and system architecture design to prototype development, thorough testing, and final deployment.
- Developed a robust web application from inception, showcasing expertise in engineering and wireless technologies to establish a seamless and secure wireless connection between the digital parking sign and the application.
- Employed AWS for efficient hosting, management, and integration, while implementing MQTT protocol over an LTE connection for reliable device communication.

iOS Mobile Application, *Personal Project* **Dec 2021 – Present**

- Developed the front-end and back-end components of a captivating 3D puzzle game utilizing Apple's object-oriented Swift language.
- Designed and meticulously tested an advanced algorithm to generate an infinite number of solvable puzzles, ensuring engaging gameplay experiences for users.
- Exhibited exceptional teamwork and collaboration skills by effectively utilizing version control software, facilitating seamless integration and coordination within the development team.

Quality Control Robot, *UBC Electrical Engineering Design Studio II* **Jan 2021 – Apr 2021**

- Designed the entire control system for a robot with 3½ degrees of freedom
- Developed and tuned a PID controller in C using the interrupt service routine of a microcontroller
- Conducted real-time simulations using a conjunction of MATLAB and SimulationX software to optimize the controller for minimum processing time
- Demonstrated circuit design skills by creating a printed circuit board for driving current to the motors
- Drastically reduced path planning time by programming an algorithm to autonomously operate one motor depending upon the position of the other two

Simple RISC Machine, *UBC Introduction to Microcomputers* **Nov 2019**

- Designed a reduced instruction set computer using Verilog which can perform a limited set of ARMv7 instructions from flash memory and programmed it onto a De1-SoC FPGA
- Created modules in Verilog such as an arithmetic logic unit, CPU, state machine controller and connected data paths between them for the implementation of instruction codes

CO-OP EXPERIENCE

Product Engineering Intern, *Langley Concrete Group of Companies* **May 2022 – Aug 2022**

- Collaborated with the engineering team at BC Hydro to contribute to multiple projects
- Conducted thorough inspections of the manufacturing process for concrete-encased grounding electrodes, ensuring compliance with IEEE standards for current carrying capacity
- Employed troubleshooting techniques to develop and implement innovative solutions for addressing product failures