DORA YANG

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EDUCATION

Bachelor's of Applied Science in Engineering Physics — Graduated May 2023
The University of British Columbia, GPA: 3.9/4.33 — Vancouver, BC, Canada

PROFESSIONAL EXPERIENCE

Electrical Engineer Co-op — May 2022 – Aug 2022
D-Wave Systems — Burnaby, BC, Canada

- Part of a team responsible for the design and maintenance of quantum computing hardware.
- Updated the design of faulty power supply units (PSU) for 20 quantum computers with a microcontroller, UART communication, a graphical user interface, and a 3D printed enclosure designed in Solidworks.
- Decreased the verification time of PSU builds by 30% by designing a voltage monitoring test load.
- Automated stock monitoring for 2100+ supply chain components by programming a Python script.

Instrumentation/Test Engineer Co-op — May 2021 – Dec 2021
Precision Nanosystems Inc. (Danaher) — Vancouver, BC, Canada

- Worked on a team designing a microfluidic medicine formulation device for commercial use.
- Developed procedures, built jigs, and performed tests using PLCs, power tools,and data acquisition equipment to evaluate system performance, regulatory compliance and guide component selection.
- Decreased test data processing time by 40% and standardized analysis for 4 team members using Matlab.
- Maintained comprehensive records of test procedures/test plans and outcomes and delivered findings and design recommendations to project engineers.

PROJECTS

Flooded Cave Rescue Communication System — Oct 2022 - May 2023

- Collaborated with UBC Physics to create a under-water wireless communication device capable of sending text messages at a rate of 50 bits per second with a range of 80 meters.
- Designed a power circuit that supplied 200 Vpp at 200 kHz to drive an acoustic transducer and debugged using oscilloscopes, multimeters, probes and function generators.
- Boosted messaging system reliability and performance by 40% by writing error handling firmware in C++.

UBC Supermileage Design Team — Oct 2020 - May 2023

- Led a team of students designing a dynamometer to test motors. Integrated a PID controller, hysteresis brake, microcontroller and sensors for speed monitoring, data collection and feedback control.
- Designed PCB schematics and layout in KiCAD for a board controlling vehicle accessories (horn, wipers), reducing size and increasing throughput by 50% and 40% respectively.
- Assembled and tested the PCB by conducting voltage and current measurements, signal integrity checks and functional testing of each component to ensure it met operational standards.

Autonomous Recycling Robot — Jul 2020 - Aug 2020

- Constructed a robot capable of picking up 5 soda cans, line following using a PID controller to a bin and dumping the cans into it in under a minute.
- Generated mechanical drawings of the robot using OnShape CAD software accounting for geometric tolerances and assembled the robot using corrugated plastic, hand tools and calipers.
- Used voltmeters and ammeters to troubleshoot circuits by analyzing signals and voltage outputs.

SKILLS

Software Python, MATLAB, C++, Microsoft Office Suite (Excel, Word, Powerpoint), Labview, Simulink

Hardware Soldering, Circuit Analysis, Oscilloscopes, Microcontrollers, Signal Generators, Test Equipment