Vincent Pan

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Education

University of British Columbia, BASc in Electrical Engineering *Sept. 2024 – May 2028*

Skills

Lab Equipment: Digital Multimeter, Oscilloscope, Function Generator, Power Supply, Soldering, Signal Analysis
Technical: KiCad, Altium, AutoCad, Revit, SolidWorks, Fusion, Excel, PowerPoint, Matlab, LTspice, C, Python
Certifications & Licenses: Class 7N Driver's License (clean record)

Experience

Electrical Subteam Member, Sustaingineering UBC *Sept 2025 – Present*

- Designed and prototyped a hybrid renewable energy system for a sustainable tiny home, integrating solar generation with a small wind turbine to support off-grid DC loads.
- Developed a remote monitoring system using sensors and microcontrollers to track battery state of charge, water flow rate, and power generation
- Collaborated with mechanical, building design, and project management teams (60+ members) to integrate electrical subsystems into functional prototypes; supported project scheduling, documentation, and budget management to maintain on-time delivery

Event Organizer and Volunteer, UBC ECESS *Sept. 2025 – Present*

- Facilitated student–industry networking during engineering career fairs by assisting company representatives and guiding students through recruitment opportunities
- Organized and supported interactive student events to promote engagement, collaboration, and community-building within the Electrical and Computer Engineering Student Society

Customer Service Provider, PizzaHut *Aug 2021 – May. 2024*

- Delivered exceptional customer service to 150+ patrons per shift while strictly adhering to health, safety, and food-handling standards, contributing to a safe and efficient dining environment
- Demonstrated a results-driven approach by resolving customer and operational issues in high-pressure team settings, maintaining service quality beyond established procedures

Technical Projects

Oven Reflow Controller, UBC *Jan 2026 – Present*

- Engineered an oven controller circuit for reflow soldering using an LCD, microcontroller, 8051 assembly instruction set, and thermocouple wire.
- Spearheaded the integration of a solid-state relay box to the reflow controller circuit, allowing precise power oscillation of a toaster oven as directed by a finite state machine, crucial for accurate soldering in PCB assembly.

Remote Controlled Car with Sonar function, Personal Project *May 2025 – Aug 2025*

- Architected modular C++ firmware, implementing interrupt-driven logic and PWM (Pulse Width Modulation) for precise motor speed control and steering
- Directed a 3-member engineering team, coordinating the hardware-software interface and managing the project lifecycle from breadboard prototyping to final chassis integration

Copper Mine Excel Simulation, UBC *Jan 2025 – May 2025*

- Evaluated three hypothetical copper mining sites by developing Excel-based simulation models to compare extraction methods, production rates, operating costs, and revenue potential
- Built financial models in Excel to estimate capital expenditures, operating costs, and profit margins, incorporating stakeholder constraints and economic trade-offs
- Optimalized mining strategy by analyzing profitability, sensitivity to cost assumptions, and stakeholder demands