

Tiger (Juelin) Zhou

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EDUCATION

The University of British Columbia

Bachelor of Applied Science in Electrical Engineering

Vancouver, British Columbia

Expected 2027

TECHNICAL WORK EXPERIENCE

Consen Automation

Hardware Verification Engineer - Intern

Beijing, China

May 2025 – Aug 2025

- Developed and executed hardware verification procedures for 5+ communication module PCBAs, testing power, clock signals, logic and status lines, reset, ripple/noise levels, and timing performance; researched component characteristics to create robust test plans.
- Collaborated on building and configuring test environments to support hardware verification procedures, including simulating real load conditions for accurate and reliable testing.
- Supported environmental compliance testing (thermal shock, temperature cycling, and ESD) for multiple in-house communication module PCBs.

Consen Automation

Hardware Engineer - Intern

Beijing, China

May 2024 – Aug 2024

- Designed CAN-to-fiber communication module schematic and PCB using Cadence Allegro/OrCAD for industrial safety systems.
- Performed hardware bring-up and debugging across CAN, RS485, SPI, USART, and fiber optic interfaces.
- Conducted design verification and collaborated across teams to ensure compliance with functional requirements.

ENGINEERING/STUDENT DESIGN TEAM EXPERIENCE

UBC Thunderbots

Electrical Team Member

University of British Columbia

Sep 2024 – Present

- Designed a CAN 2.0B hardware module to enable reliable communication between Raspberry Pi and motor drivers.
- Spearheaded a major PCB layout overhaul for a BLDC motor driver, incorporating a new current sensing architecture and on-board CAN communication to elevate control precision and network capability.
- Debugged and validated motor driver, power, and UI hardware using laboratory equipment such as oscilloscopes, logic analyzers, and multimeters to identify and resolve hardware issues.
- Develop and debug SPI communication and BLDC motor control C firmware for STSPIN32F0251 motor drivers.

Stirling Refrigeration System for Vaccine Storage

University of British Columbia

Sep 2024 – Apr 2025

Electrical Designer

- Designed a brushed DC motor driver (24V) and voltage regulation hardware using Altium Designer.
- Integrated Hall effect sensors, rotary encoders, pressure transducers, and thermistors for data acquisition and motor control applications.
- Used Python scripting and an ESP32 to design an automated thermistor calibration tool, achieving a 90% reduction in calibration time.
- Designed and integrated C++ ESP32 firmware for motor control and monitoring system conditions/parameters.

SKILLS

Software: Cadence Allegro/OrCAD, Altium Designer, KiCad, LTspice, LabView, Quartus Prime, SolidWorks

Practical: Oscilloscope, DMM, SMD/THT Soldering, Logic Analyzer, Machine Shop

Programming: C, C++, C#, Python, Assembly, VHDL, MATLAB, Git, JS, CSS, HTML

ADDITIONAL

Languages: Fluent in English and Mandarin

Certifications and Training: PSSP Category 3, Construction Safety Training

Interests and Activities: Basketball, Ice Hockey, Fitness, League of Legends, Clash Royale (11500+ trophies), Reading

LinkedIn: www.linkedin.com/in/tiger-zhou-746893257

Portfolio: <https://tttjjjzzz.github.io/>