

Jeremy Poulin

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Skills

Design Tools: Altium Designer, SolidWorks, STM32CubeIDE, Arduino IDE, LTspice, VS Code, Git, Unity, COMSOL
Programming Languages: Java, C/C++, C#, VHDL, TypeScript, JavaScript, Python, HTML/CSS, MySQL, LaTeX
Lab Equipment: Oscilloscope, Multimeter, Function Generator, DMM, Soldering Station, 3D Printer
Certifications: Altium Education Basic PCB Design, Canada Amateur Radio License, RPAS Operator Basic License

Work Experience

ELECTRICAL ENGINEERING TEAM MEMBER January 2025 – Present
Waterloo Aerial Robotics Group Waterloo, ON

- Researching and selecting components for a dual frequency ground control radio transmitter to expand compatibility with receivers embedded in existing RPAS systems
- Designed a voltage regulator PCB in Altium Designer to facilitate testing and optimize space
- Experienced hands-on workshops involving PCB assembly and implementation

Hardware Projects

TURNTABLE DESIGN | *Altium Designer, SolidWorks, Embedded Systems* Jan 2025 – Present

- An affordable and open source device creating a modular and repairable alternative to consumer options
- Designing Motor Driver and rechargeable Power Supply PCBs using Altium Designer, optimizing device size
- Designing a tonearm and casing using SolidWorks, minimizing unwanted needle movement
- Researching and sourcing cost-optimized components and materials for design implementation

FPV DRONE DESIGN | *Soldering, Multimeter, Project Management, Cost Efficiency* Mar 2021 – Dec 2023

- Sourced affordable parts to create an open-source DIY project undercutting the monopolized consumer market
- Soldered battery leads and connections between the flight controller, 2450KV motors, ESCs and other components
- Ensured the device met government weight/registration regulations, while achieving speeds over 100km/h
- Implemented disarm and smoke-stopper mechanisms to enhance safety

LIBRARY NOISE MONITOR | *Breadboard, STM32, Git, Design Demonstration* Sep 2024 – Nov 2024

- Designed solution to excessive noise in libraries using an STM32 to monitor noise levels within 5dB of accuracy
- Interfaced microphone and output warning LEDs to signal high noise levels
- Utilized Git and presented the device's design and functionality to stakeholders

Software Projects

GAME DEVELOPMENT | *Java, C#, Eclipse, Godot* Aug 2023 – Present

- Led development in a team of 5 students to complete a game jam submission in 9 days (2025)
- Designed and developed a video game using Java and JFrame library with Eclipse (2023)
- Created 2 dedicated hardware devices with integrated Raspberry Pi, battery, controls, screen and custom casing to allow for a unique, enhanced player experience and increased portability (2023)

Extra-Curriculars

INTERNATIONAL LEVEL ATHLETE 2015 – Present

Canoe/Kayak

- Qualified for and competed in the ICF Junior Marathon World Championships in 2022 and 2023
- Balance intense training with high-achieving academics and a social life
- Compete as a varsity athlete for the University of Waterloo Nordic Ski Team

Education

UNIVERSITY OF WATERLOO Sep 2024 – April 2029

Bachelor of Applied Science in Computer Engineering

Waterloo, ON

- President's Scholarship of Distinction
- Schulich Leader Entrepreneurial-Minded STEM Scholarship Nominee