

Jason Liu

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Education

Westdale Secondary School | Hamilton, ON

- Expected Graduation: June 2027
- Awarded the Vern Ames Mathematics Award

Technical Skills

- Programming: C++, Java, CSS, HTML, QMK
- Hardware and Electronics: KiCad (schematic and PCB layout), Soldering, Circuit Assembly
- Microcontrollers: Arduino Uno, RP2040, ESP32, nRF52840
- CAD and Manufacturing: Fusion 360, 3D Printing

Engineering Projects

65% Mechanical Keyboard | [GitHub](#)

- Designed and built a fully functional keyboard featuring a custom 2-layer KiCad PCB with a RP2040 MCU, key matrix, hot swap sockets, and rotary encoder
- Wrote QMK firmware to manage keymapping, layer switching, and encoder functionality
- Modeled the plate and enclosure with Fusion 360, which uses an integrated plate mounting system and accounts for heat-set inserts and PCB tolerances. Manufactured parts through 3D printing
- Hand-soldered over 250 electrical connections and tested for full keyboard functionality

3-DOF Robotic Arm | [GitHub](#)

- Designed a 3-DOF robotic arm with a claw in Fusion 360
- Programmed an Arduino Uno to process potentiometer inputs and control servo rotation
- Incorporated a PCA9685 16-channel PWM driver via I2C to simplify the wiring and allow for the use of multiple servos and external power supply

Leadership & Activities

School Robotics Team Member | 2025 - Present

- Modeled structural CAD components in Fusion 360 and contributed to the mechanical assembly of multiple competition robots

Hackathon Organizer | 2026

- Co-organized a 25+ participant game development hackathon for teens; coordinated logistics, participant support, and day-of event operations alongside a team

Hackathon Participant | 2026 - Present

- Built and debugged software and hardware projects during multiple hackathons, collaborating with others to develop working designs under tight deadlines.

Volunteer Experience

Camp Counsellor - Les Petite Pommes | 2023-2025

Event Volunteer for MCYU | October 2024 – 2025