

# AUSTIN WILLIAMS

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## Education

### University of Waterloo

Bachelor of Applied Science in Mechatronics Engineering

Waterloo, Ontario

## Technical Skills

**Software** | C++, Python, Arduino IDE, AutoCAD, SolidWorks

**Hardware** | Sensors integration, Embedded systems, Operating systems, Arduino Uno, Bluetooth Integration

**Other** | Microsoft Office, Google Workspace, LSS Yellow Belt, Data Analysis, Communication, Adaptability

## Projects

### Toddler Drawing Gantry System | VexIQ, C++

September 2025 – December 2025

- \* Designed and built a 2-axis gantry system using VEX components to precisely control pen motion
- \* Implemented coordinated motor control algorithms in C++ to accurately render predefined geometric shapes
- \* Integrated safety-oriented design features to ensure reliable use by young children while maintaining function

### Smartphone-Controlled Robotic Car | Arduino Uno, Arduino IDE

July 2025 – August 2025

- \* Built a robotic vehicle featuring DC motors and motor driver circuitry, including chassis assembly and wiring
- \* Integrated HC-05 Bluetooth module to enable wireless communication between the robot and a smartphone
- \* Developed embedded motor control logic and a mobile control interface for real-time user input

## Experience

### Swim Instructor

2024 – 2025

Self Employed

Belleville, Ontario

- \* Instructed competitive swimmers (ages 11–17), improving stroke technique, speed, and safety awareness
- \* Demonstrated strong leadership, communication, adaptability, and risk management in a fast-paced aquatic environment

### Science Fair Instructional Website

2022 – 2023

QRSTF Volunteer Position

Belleville, Ontario

- \* Developed an educational website guiding students through online science fair project development
- \* Content was recognized and reposted by Chris Hadfield, reaching 1,000+ views
- \* Strengthened technical communication and web development skills through user-focused design

### STEM Content Creator

2023 – 2025

QRSTF Volunteer Position

Belleville, Ontario

- \* Designed and produced instructional STEM videos explaining science fair procedures and science outreach topics
- \* Content used across multiple regions in Canada, achieving 12,000+ total views

## Awards

**Entrance Scholarship** | President's Scholarship of Distinction

2025

**Governor General's Academic Medal** | Top Average in Grade 12

2025

**Lieutenant Governor's Volunteer Award** | Most Volunteer Hours

2025

**The Belleville Police Award** | Association with Police in Promoting Safety

2025

**Duke of Edinburgh Gold Award** | Completed the Duke of Edinburgh Program

2024

## Leadership

**Befriended Elderly** | Donated and became pen pals with a resident at a local retirement home

2023 – present

**Peer Mentor** | Supported students in academics and STEM initiatives

2021 – 2025

**Student Voice Council Member** | Represented student perspectives in school governance

2024

**Hasting's Manor Long Term Care Facility** | Helped clean up gardens at a local retirement home

2023

**Grace Inn Homeless Shelter** | Fundraised and organized events for the unhoused

2023

## Other Interests

- \* Certified Lifeguard
- \* PADI Openwater

- \* Bikepacking (200km)
- \* White Water Kayaking

- \* Varsity Swimming