

# AUSTIN WILLIAMS

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## Education

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### University of Waterloo

*Bachelor of Applied Science in Mechatronics Engineering*

*Waterloo, Ontario*

## Technical Skills

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**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

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### 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

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### 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

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**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

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**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

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- \* Certified Lifeguard
- \* PADI Openwater
- \* Bikepacking (200km)
- \* White Water Kayaking
- \* Varsity Swimming