# Anas Javaid

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## Profile

Aspiring Electrical Engineer student with a strong passion for robotics, embedded systems, and innovative problem-solving. Skilled in designing and integrating hardware and software to create efficient, real-world solutions. Experienced in developing Bluetooth-controlled RC cars and smart security systems with sensor integration and automated control. Highly motivated to expand technical expertise and contribute to innovative engineering projects.

## EDUCATION

## Western University

London, ON

Bachelor of Electrical Engineering (CO-OP)

Sep 2024 - Present

- Focused on embedded systems, power electronics, and circuit design
- Developed strong technical and analytical skills in PCB design.

# Bishop Ryan Catholic Secondary School

Hamilton, ON

High School Diploma

Sep 2020 - Jun 2024

- Member of the Math Club, Diversity Council, and Coding Club.
- Built a circuit board with LEDs, buttons, and resistors, performing soldering, prototyping, and learning hands-on problem-solving.

## PROJECTS

# Emergency Route Planner | Academic Project

Jan 2025 - April 2025

- Developed a web-based emergency route planning tool using **Leaflet.js** and **Turf.js** to calculate safe navigation paths during natural disasters like floods and wildfires.
- Applied graph algorithms and GIS data to compute safest and fastest emergency routes.
- Developed prototype using HTML, CSS, JavaScript and OpenRouteService API.

#### RC Car | Personal Project

July 2025 - Oct 2025

- Developed a Bluetooth-controlled RC car using Arduino Nano, HC-05 module, H-bridge motor driver, and SG90 servo.
- Programmed motor control logic in  $\mathbb{C}/\mathbb{C}++$  for forward, reverse, and turning maneuvers.
- Powered system with dual LiPo batteries and optimized 5V distribution using buck converters.

# Safe Security System | Personal Project

August 2025 - Oct 2025

- Built an Arduino Uno-based smart home security system with password entry, motion sensing, and LCD display.
- PIR Sensor, keypad, and buzzer components; optimized low-power operation using sleep modes.
- Designed system wiring on a mini breadboard with power regulated through a buck converter.

## EXTRACURRICULAR ACTIVITIES

## WeBots(Western Robotics Club)

Sept 2025 - Present

- Developed and tested robotic control systems using sensor feedback to optimize performance.
- Implemented PID and other control algorithms for precise autonomous robot motion.
- Integrated hardware and software systems, ensuring reliable operation in real-world testing.

#### Western Aero Design

Sept 2025 - Present

- Designed and integrated electrical systems for competitive aircraft projects.
- Designed PCB layouts for avionics subsystems and ensured signal integrity for flight control.
- Collaborated with multidisciplinary teams to ensure system functionality and safety compliance.

# SKILLS

Programming Languages: Python, C/C++, Matlab, Java, JavaScript, HTML, CSS

Skills: PowerPoint, Microsoft Visual Studio Code, Embedded Systems, Soldering, Arduino circuits, Fusion 360, 3-D printing