Anas Javaid

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Profile

I'm an aspiring 2nd year Electrical Engineer with a strong passion for robotics, embedded systems, and innovative problem-solving. My interests lie in creating solutions that merge hardware and software into practical, real-world applications. From designing Bluetooth-controlled RC cars to building smart security systems with integrated sensors and locking mechanisms, I enjoy every stage of the process and I'm always keen to learn more.

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 **C/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