Anas Javaid

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Profile

Aspiring Electrical Engineering 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.
- Assembled and prototyped a circuit board with electronic components, gaining hands-on circuit design and troubleshooting experience.

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