Aayan Rahman

416-510-3376 | aayan.s.rahman@gmail.com | linkedin.com/in/aayanrahman | github.com/aayanrahman

PROFESSIONAL SUMMARY

First-year Electrical Engineering student at the University of Waterloo seeking a Winter 2026 co-op. Passionate about hardware and software systems, with hands-on experience in circuit design, embedded development, and team-based engineering projects. Open to roles in power systems, RF, embedded systems, or software engineering.

EDUCATION

University of Waterloo   Waterloo, ON
BASc, Electrical Engineering (Co-op), Power Systems Focus   *Sept 2025 – Apr 2030*
- 1A Coursework: Classical Mechanics (ECE 105), Programming (ECE 150), Engineering Practice (ECE 190), Project Studio (ECE 198)

White Oaks Secondary School   Oakville, ON
International Baccalaureate Diploma   *Sept 2023 – May 2025*

PROJECTS

Waterloo Electrathon Competition | *LTspice, Onshape, Soldering, Battery Systems*   Oct 2024 – May 2025
- Led electrical design of single-seat race car; authored wiring diagram, BOM, and failure-mode checklist for Waterloo Electrathon competition.
- Selected optimal 2.5kW BLDC motor through torque-speed analysis, achieving 12% efficiency improvement over baseline design.
- Designed 12V SLA battery system with 100A ANL fuse sizing based on surge current calculations and safety margins.
- Simulated PWM control, fuse heating, and voltage drops in LTspice; optimized drivetrain ratio for 40 km/h target speed.

UofT Hacks | *Node.js, Git Hooks, Regex*   Jan 2025
- Built *ProteccAPI*, a Git-integrated package scanner preventing secret/API key leaks pre-deployment.
- Applied system-level thinking to integrate code validation directly into developer workflows.

Hack The North | *React.js, DeckGL, Mappedin API*   Sep 2024
- Developed an indoor navigation and activity heatmap system for event productivity tracking.
- Integrated live user data with floorplan-based visualizations using DeckGL and custom UI components.

EXPERIENCE

Code Ninjas   Sep 2024 - Present
Instructor (Sensei)   *Oakville, ON*
- Taught JavaScript and C# (Unity) to 50+ students, adapting core concepts like conditionals and functions for younger learners.
- Introduced basic circuit logic and problem-solving frameworks to children aged 4 to 7.
- Supported day-to-day operations, ensuring smooth lesson delivery and technical readiness of equipment.

Brain Stimuli Project – University of Toronto   Oct 2024 - Feb 2025
Full Stack Developer   *Toronto, ON*
- Engineered a full-stack AI emotion recognition tool using React and MongoDB, assisting in experimental neuroscience trials.
- Designed and implemented data pipelines and signal visualization features using JavaScript and REST APIs.

TECHNICAL SKILLS

Hardware: Circuit Design, LTspice, Multimeter Use, Soldering, Power Systems, Battery Management, Digital Logic
Software: JavaScript, Python, C, Bash, SQL
Tools: LTspice, Onshape, Git, VS Code, Visual Studio, Notion, Figma
Frameworks: React.js, Node.js, Unity (C#), Express.js
Other: Microsoft Office, Project Coordination, CAD Standards, Technical Writing