Kevin Osei-Sarfo

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EDUCATION

DALHOUSIE UNIVERSITY **Halifax, NS**
Bachelor of Engineering, Electrical Engineering *Expected May 2027*

SAINT MARY'S UNIVERSITY **Halifax, NS**
Diploma in engineering *Graduated May 2024*

CO-OP STATUS

- Available for co-op in May 2026
- Completed 7 out of 9 academic terms as of December 2025

WORK EXPERIENCE

Dalhousie Emera Idea Hub **Halifax, NS**
Electrical Engineer (Co-op Student) January 2026 – Present

- Assisting with PCB schematic and layout using KiCad and LTspice for electrical product prototypes.
- Assembling, testing, and debugging electrical circuit boards to validate prototype functionality.
- Supporting engineers and startups with prototype setup, electrical testing, and documentation.
- Designed mechanical components using SolidWorks and produced parts via 3D printing for rapid prototyping.

Colchester Sexual Assault Centre **Truro, NS**
Data Analyst (Co-op Student) May 2025 – August 2025

- Designed and implemented an automated grant discovery and application tool integrating Python, Selenium, and AI-powered draft generation, reducing research time by 60%.
- Translated outreach and support resources into Asante Twi, improving accessibility for Ghanaian community members.
- Collaborated with staff to align technical solutions with organizational needs, strengthening capacity for program funding and service delivery.

Saint Mary's University **Halifax, NS**
Facilities Management Custodial Staff- Summer Student May 2024 – September 2024

- Contributed to a clean and safe campus environment by performing daily custodial duties.
- Demonstrated strong work ethic and attention to detail in maintaining campus facilities.
- Developed time management and organizational skills through efficient task completion.

Mathnasium of Halifax **Halifax, NS**
Maths Instructor July 2022 – November 2023

- Worked with a group of at least 3 instructors in a fast-paced environment to tutor students in maths.
- Assisted students with their homework and helped them understand mathematical concepts.
- Developed and implemented strategies to improve student performance, fostering long-term academic success.

SKILLS

- **Technical Software:** Skilled in Python, SolidWorks, Altium, KiCad, LT Spice, AutoCAD, Matlab, Microsoft Office Suite.
- **Communication and Reporting:** Strong verbal and written communication skills with the ability to convey complex information to diverse audiences effectively.
- **Time Management:** Proven ability to prioritize tasks and meet deadlines efficiently.
- **Team Collaboration:** Effective team player with experience working across multidisciplinary teams.
- **Problem Solving:** Analytical thinker capable of identifying and resolving complex challenges.
- **Project Management:** Experience managing timelines, budgets, and resources to achieve project goals.
- **Leadership:** Experience leading teams, organizing events, and managing technical operations in high-pressure environments.
- **Adaptability:** Self-starter with the ability to work effectively both independently and in team environments to achieve project goals.

RELEVANT PROJECTS & RESEARCH IN ENGINEERING

2025 Peter Gregson Design Challenge **Halifax, NS**
Dalhousie University January 2025 – April 2025

- Designed and built the robot's safe-cracking mechanism using a NEMA-17 stepper from SolidWorks modeling/simulation through mechanical component selection, 3D-printed fabrication, assembly, and bench validation.
- Contributed to overall system integration on the robot "DaliBOT", coordinating with subsystems (loot pickup, sensing, navigation) and supporting pit-lane troubleshooting during runs.
- Led iterative CAD development and fit checks for the mechanism and mounting, ensuring smooth integration with the main chassis and access for service.

Autonomous Robot Design **Halifax, NS**
Saint Mary's University March 2024 – April 2024

- Developed an autonomous robot capable of moving in a straight line, detecting an opponent, and launching ping-pong balls.
- Designed the robot with a compact and functional structure, incorporating a 3D-printed shield, optimized wheelbase, and Arduino-based control system.

Face Detector Security System **Halifax, NS**
Saint Mary's University March 2024 – April 2024

- Developed a facial recognition-based security system using the ESP32-CAM module for access control.
- Applied machine learning algorithms for real-time facial detection and recognition.

Watercraft Prototype Design **Halifax, NS**
Saint Mary's University September 2022 – December 2023

- Designed and prototyped a watercraft capable of navigating a channel within 30 seconds without contact with the sides.
- Conducted detailed calculations and simulations to validate the design's performance and flotation characteristics.

LEADERSHIP AND VOLUNTEER EXPERIENCE

Dalhousie FSAE Team **Halifax, NS**
Electrical Subsystem Team Member September 2025 – Present

- Designed a custom brake light PCB in Altium for the electric Formula SAE Team, meeting FSAE safety and visibility regulations.
- Created schematics and PCB layouts in KiCad for TSSI/RTML indicators.

All Nations Full Gospel Church **Halifax, NS**

Head Lights Technician May 2022 – December 2025

- Led the lighting team in the planning, design, and execution of lighting setups for worship services, events, and special programs.
- Managed the operation and maintenance of lighting equipment to ensure optimal performance during live events.