

Samuel O'Blenes

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Summary of Qualifications

- Familiar with CAD software (Fusion 360, AutoCAD, SolidWorks), applied to academic and personal engineering design projects
- Experience in Python programming, working with NumPy and Matplotlib libraries for basic data analysis and visualization
- Familiar with Microsoft Word and Excel
- Experience in basic electronic prototyping, assembling electronic circuits using breadboards, basic soldering and using simple microcontrollers, from personal robotics and design projects
- Experience with FDM 3D printing, including preparing models using slicer software, operating printers, and troubleshooting print issues
- Experience using Eppendorf micropipettes to accurately prepare solutions and perform dilutions
- Completed high school co-op placement at Powell Safe Roads Engineering, gaining exposure to a professional civil and mechanical engineering environment
- Strong teamwork and communication skills developed as a certified lifeguard and swim instructor

Relevant Experience

High School Co-op Student

Sep 2023 – Jan 2024

Powell Safe Roads Engineering

- Observed and learned from civil and mechanical engineers
- Learned AutoCAD for creating basic schematics
- Learned basics of RapidPlan software for creating traffic control plans

Education

Bachelor of Applied Science Candidate, Nanotechnology Engineering

Sep 2025 – present

University of Waterloo, Waterloo, Ontario

- Designed and built a wind-powered triboelectric nanogenerator in a team, using SolidWorks for modeling and FDM 3D printing and laser cutting for fabrication, generating measurable electrical output
- Developed a Python-based curve fitting web application using SciPy and Matplotlib libraries, that accepts manual data entry or .csv files and allows the user to select a statistical distribution and visualize the resulting curve
- Completed first-year coursework in calculus, chemistry, linear algebra and programming

Additional experience

Able Sail, Adaptive Sailing Instructor

Jul 2025 – Aug 2025

Lifeguard and Swim Instructor

Oct 2023 – Mar 2024