Évence Batobo

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Education

University of Ottawa Expected Graduation Date: May 2029

Bachelor of Applied Science in Computer Engineering *Ottawa, Ontario*

- Recipient of the Schulich Leader Scholarship in Engineering at uOttawa.
- Relevant Coursework: **Data Structures & Algorithms,** Computer Architecture I & II, Digital Systems I & II
- Association: ColorStack, uORover Team, IEEE uOttawa

Projects

FPGA Fixed-Point ALU & Arithmetic Unit | *VHDL, RTL, Vivado, Artix-7 FPGA* 2026

- Designed a synchronous **fixed-point ALU** in structural VHDL, implementing signed arithmetic and FSM-controlled sequential multiplication and division.
- Verified functionality using **VHDL testbenches, waveform analysis, and on-board FPGA testing**; debugged clock/reset behavior and analyzed timing reports.

FlowTech Website | *React, TypeScript, Next.js, APIs, Web Development* 2026

- Developed and deployed a production web application using **Next.js, React, and TypeScript** for a real-world client, supporting customer acquisition and digital operations.
- Integrated an **EmailJS API** to trigger inquiry notifications and implemented Meta Pixel conversion tracking for interactive forms and buttons.
- Optimized **server-side rendering (SSR), SEO, and semantic HTML** to improve search visibility and page performance.

DIY 7-inch Quadcopter Drone | *Embedded Hardware, Soldering, GPS, Testing* 2026

- Integrated and soldered a **SpeedyBee F405 V5 flight controller**, ESC, motors, GPS, and radio components for manual and autonomous flight.
- Configured GPS-based **Return-to-Home failsafe** behavior and troubleshot power, signal, and peripheral integration issues during testing.

Leadership

uOttawa Rover Club | *C++, ROS 2, Linux, Docker, Device Integration* 2026

- Integrated a **YDLIDAR X4** by passing USB access into WSL with `usbipd`, rebuilding the SDK in a Docker devcontainer, and validating scan streaming over `/dev/ttyUSB0` at 128000 baud.
- Developed a **C++ ROS 2 node** to publish SDK-driven lidar scans as `LaserScan` messages on `/scan` at approximately 5.4 Hz, handling no-return measurements as infinity.
- Automated SDK setup and created a **ROS 2 launch workflow** integrating the lidar node, coordinate transforms, and RViz visualization.

Volunteer Robotics Club Tutor 2024 – 2026

Tech Smart Robotics *Gatineau, QC*

- Mentored 15+ students in designing and building sensor-driven robots, guiding them from concept to competition-ready prototypes.

Technical Skills

- **Languages:** C, C++, Python, VHDL, Java, JavaScript/TypeScript
- **Embedded & Hardware:** FPGA, RTL Design, GPIO, Arduino, Digital Logic, Sensor Integration, Soldering, Hardware Debugging
- **Tools & Systems:** Linux/Ubuntu, Docker, Git/GitHub, Xilinx Vivado, Quartus, VS Code
- **Software Concepts:** Data Structures & Algorithms, Object-Oriented Programming, REST APIs, Client-Server Architecture, Testing & Debugging