

# Chizorom Anyalechi

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## EDUCATION

### University of Guelph

Bachelor of Computer Engineering (Co-op)

Guelph, ON

2024 – Present

- Recipient of Entrance Scholarship of \$2000 based on a 94% admission average, extracurricular involvement, and volunteering.

## TECHNICAL SKILLS

- Programming and Scripting:** C, C++, Java, MATLAB, VHDL, HTML, CSS, JavaScript
- Tools and Platforms:** Xilinx ISE, AutoCAD, GitHub, Microsoft Office Suite
- Engineering and Design:** FPGA development, algorithm design, debugging, CAD modeling
- Relevant Courses:** Data Structures, Object-Oriented Programming, Electrical Circuits, Digital Systems Design

## PROJECT EXPERIENCE

### 4-Bit Arithmetic Logic Unit (ALU) and Datapath | VHDL, Xilinx ISE, FPGA

Sep – Dec 2025

- Designed a 4-bit ALU in VHDL supporting arithmetic and logic operations including **addition, subtraction, AND, OR, XOR**.
- Developed VHDL test benches to validate correctness through **simulation waveforms** and functional edge cases.
- Synthesized and deployed the design on an **FPGA**, integrating a **seven-segment display** to visualize outputs.
- Performed **timing optimization** to reduce propagation delay and improve **circuit performance**.
- Documented **ALU architecture, verification methodology, and design constraints** for reproducibility.

### Tic-Tac-Toe Game | C

Sep – Dec 2024

- Developed a Tic-Tac-Toe game implementing core **gameplay logic** and dynamic **board updates**.
- Used **arrays, loops, and conditionals** to process user input and determine **winning conditions**.
- Applied **modular programming** to improve code **readability and maintainability**.
- Performed **iterative debugging and testing** to ensure efficient and error-free execution.

### Autonomous Car with Launcher | AutoCAD, Embedded Systems

Sep – Dec 2024

- Designed an autonomous vehicle with a **launcher mechanism** using **AutoCAD**.
- Integrated **sensors and control logic** to detect obstacles and trigger actuation.
- Performed **center of mass and stability calculations** to optimize **system balance**.
- Collaborated in a **team-based engineering project** to assemble and validate the prototype.

## VOLUNTEER AND WORK EXPERIENCE

### Summer Camp Activity Coordinator

Summer 2023

Heartland Church Connected

Mississauga, ON

- Supervised over **50 children** daily to ensure safety and engagement.
- Organized recreational activities to foster creativity and teamwork.
- Planned weekly schedules and managed supplies to maintain program operations.

## ACADEMIC AND COMMUNITY INVOLVEMENT

### Formula SAE Racing Team

Jan 2025 – Present

University of Guelph

Guelph, ON

- Designing and building a Formula-style race car for international competition.