

# OBATOSIN OBAT-OLOWU

[www.0xobat.com](http://www.0xobat.com) ♦ 4167285985 ♦ [obatoLOWU@gmail.com](mailto:obatoLOWU@gmail.com) ♦ [linkedin.com/in/obat-olowu-o](https://www.linkedin.com/in/obat-olowu-o)

## EDUCATION

Lakehead University Thunder Bay

May 2023

**Undergraduate degree:** Bachelor of Engineering in Electrical Engineering

**SKILLS:** C++, Verilog, Python, System Design, Circuit Design, Candace, MATLAB, Linux OS, Microcontroller, I2C Protocol, Hardware Design, FPGA Programming, Prototyping, DOORS, MagicDraw, Web Design



**COURSEWORK:** Computer Organization and Architecture, Digital Signal Processing, Analog CMOS Integrated Circuits, Digital VLSI Circuit Design, Electric Circuit Design, RF Circuits Design, Control Systems, Electronic Communication, High-Performance Embedded Systems, Fuzzy Logic Expert Systems, Complex Functions and PDEs, Basics of Management

## WORK EXPERIENCE

### ALSTOM: CONTROL ENGINEER

October 2023 – Present

*Saint-Bruno-de-Montarville, Quebec. (Remote)*

- Accountable for delivering Train Control documentation, including Requirement Specification and Architecture Description (RSAD), Technical Purchase Specification (TPS), and Interface Control Document (ICD)
- Define and implement functional, performance, transverse, and train-level requirements for the Train Control and Management System (TCMS)
- Integrated systems into the vehicle, defined system interfaces, and verifications through design reviews

### ALSTOM: TRAIN SYSTEM ENGINEERING INTERN

January 2022 – October 2023

*Saint-Bruno-de-Montarville, Quebec. (Remote)*

- Released 15+ Vehicle Concept Documents implementing the functionality of different subsystems
- Investigated and implemented gaps in documentation for various operation modes, including sleep mode
- Supported the creation and development of a Traceability methodology used to verify the completeness of the system design
- Aligned Vehicle Design Documents with test procedures to ensure proper safety and functionality of the vehicle

### BOMBARDIER: FUNCTIONAL ARCHITECTURE INTERN

January 2021 – Dec. 2021

*Saint-Bruno-de-Montarville, Quebec. (Remote)*

- Improved the functionality and cycle time of documentation by efficiently automating the manual generation process
- Developed Test Specifications for TCMS subsystems to ensure proper safety and quality standards
- Implemented changes to TCMS HMI templates to enhance the user experience

### LAKEHEAD: RESEARCH ASSISTANT

July 2019 – August 2020

*Thunder Bay, Ontario.*

- Designed an ultra-low power receiver using a Chirp Ultra-wideband modulation scheme for personal wireless systems
- Explored circuit design and performance metrics using the Cadence Process Design Kit.
- Developed a receiver design using the injection locking properties applicable to high-frequency wireless applications.

## PROJECTS

### AGRICULTURAL MONITORING SENSOR NETWORK

Sept. 2022 – April 2023

- Designed a low-cost sensor network (LoRa-WAN) prototype to empower small-scale farmers to rival large-scale operations
- Designed software and hardware for the sensor network, including power cycling for improved power efficiency
- Developed an Android application (Kotlin) that displays the network status and provides analysis of the collected data

### FLIGHT CONTROL DRONE PROJECT

May 2022 - Present

- Created quadcopter and tested schematics I designed to ensure efficient power distribution and secure safety measures
- Designed the auto-levelling system using a PID controls system that I programmed on the microcontroller
- Programmed and debugged microcontroller (C++) to interface with gyroscope and accelerometer using I2C protocol

### ARITHMETIC LOGIC UNIT DESIGN

November 2019

- Designed and implemented an Arithmetic Logic Unit (ALU) on an Altera DE10- Lite FPGA using Verilog HDL
- Developed RTL code for simulations to verify the design implementation

### FALL DETECTION AND PREVENTION DEVICE

January 2019 - April 2019

- Designed a wearable fall detection device by leveraging MEMS sensors and a Wi-Fi-enabled ESP32 microcontroller
- Developed a C-based algorithm to accurately detect falls based on sensor data using a variable threshold
- Established seamless communication between the sensors and a server-hosted webpage for real-time monitoring

## INVOLVEMENT

**Institute of Electrical and Electronics Engineers (IEEE) – Chapter Member**

July 2019 – Present

**Multiple Sclerosis Society of Canada – Volunteer**

January 2021 – Present

**Lakehead University Makerspace – 3D printing Technician**

September 2022 – April 2023

**Engineering Student Society – Program Coordinator**

September 2019 – April 2020