

# Muthui Mureithi

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GitHub: <https://github.com/Montoy22>

## SUMMARY OF SKILLS

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**Tools:** • PyCharm • IntelliJIDE • Visual Studio Code • ModelSim • Xilinx Vivado • MatLab • Arduino

**Microcontrollers & Electronics:** Atmega328p, FPGA boards

**Programming:** C++ • Python • Java • VHDL • Javascript

**Methodologies:** Agile(Scrum) • Waterfall

**Languages:** French(Spoken & Written) • English (Spoken & Written) • Japanese (Spoken)

**Operating system:** Windows 11, Linux

## EDUCATION

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**Bachelor of Engineering – Computer Engineering C.Edge**

**2022 - 2027**

Concordia University, Montreal, QC

- Member of the Institute for Co-operative Education
- Introductory Engineering Team Design Project, Computer Architecture & Design, Digital Systems Design

**Pure & applied sciences**

**2019 - 2022**

Collège de Bois-de-Boulogne, Montréal, QC

## PROJECTS

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**Design of basic computer components | VHDL, FPGA, Xilinx Vivado, ModelSim (Academic, Solo)**

**2025**

Computer Architecture & Design

- Designed ALU, register file, and next -address unit using VHDL.
- Verified logic on an FPGA board using Xilinx Vivado.

**Design of a room occupancy tracker | VHDL, FPGA, Xilinx Vivado, ModelSim (Academic, Solo)**

**2025**

Computer Architecture & Design

- Built a VHDL-based tracker for detecting room occupancy.
- Validated design through simulation on an FPGA board using Xilinx Vivado.

**Hovercraft competition | Atmega328p, C/C++, Arduino (Academic, Group)**

**2024**

Introductory Engineering Team Design Project

- Developed a hovercraft capable of navigating a maze using ultrasonic sensors and fans.
- Programmed microcontroller logic in C/C++ and Arduino.

## WORK EXPERIENCE

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### Kitchen aid

**June 2023– Aug 2023**

St-Hubert Express, Montreal, Quebec

- Collaborated in a fast-paced environment; developed teamwork, time management, and problem-solving skills.

### Donation handling

**June 2020– Jan 2021**

Renaissance, Montreal, Quebec

- Managed inventory and organized donations; strengthened communication and customer service skills

## VOLUNTEER WORK

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### Volunteer at Otakuthon

**Aug 2023**

Convention promoting Japanese animation, Montreal, Quebec

- Assisted attendees with Japanese language activities and promoted cultural workshops.

### Water distributor for Scotia bank 21k race

**April 2019**

Canada running series, Montreal, Quebec

- Supported marathon runners by distributing water and encouragement.