Muthui Mureithi

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Portfolio: MyWebsiteLink • **GitHub:** **https://github.com/Montoy22**

SUMMARY OF SKILLS

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

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

Methodologies: Agile(Scrum) • Waterfall

Languages: French• English• Japanese

Operating system: Windows 11, Linux

EDUCATION

Bachelor of Engineering – Computer Engineering C.Edge **2022 - 2027**
Concordia University, Montreal, QC

- Member of the Institute for Co-operative Education
- Relevant Courses: Software Process and Practices, Data Structures & Algorithms, and Computer Architecture & Design

Pure & Applied Sciences **2019 - 2022**
Collège de Bois-de-Boulogne, Montréal, QC

PROJECTS

Personal Website | Java, Javascript (Personal, Solo) **2025**

- Built and deployed a personal website on Azure using Spring Boot, for the backend, and Bootstrap, for the frontend.

Real-time Chatting Application | Node.js, React.js, MySQL (Academic, Group) **2025**
Software Process and Practices

- Built a full-stack chat application where users can send/receive messages in real time.
- Implemented Agile practices (short sprints, feature testing) and Git-based team collaboration.
- Strengthened skills in REST API development, relational database design, and React state management.

Maze Game | Java (Personal, Solo) **2025**

- Designed a GUI application where a user can generate and solve maze.
- Applied object-oriented programming and algorithm design to implement maze generation and pathfinding.
- Implemented Junit test cases and automatic testing to ensure reliability and correctness of code logic.

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

Stock news notifier | Python (Personal, Solo) 2024

- Developed a script that monitors stock price changes and notifies users, through WhatsApp using Twilio, with related news articles.
- Integrated financial APIs and automated data retrieval.

Snake Game| Python (Personal, Solo) 2024

- Developed an interactive snake game with increasing difficulty and collision detection.
- Applied object-oriented programming.

WORK EXPERIENCES

Kitchen aid **June 2023– Aug 2023**
St-Hubert Express, Montreal, Quebec

Donation handling **June 2020– Jan 2021**
Renaissance, Montreal, Quebec

VOLUNTEER WORKS

Volunteer at Otakuthon **Aug 2023**
Convention promoting Japanese animation, Montreal, Quebec

Water distributor for Scotia bank 21k race **April 2019**
Canada running series, Montreal, Quebec