KURO GBOUN

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EDUCATION

Carleton University, Sept 2022 - April 2026

- *Bachelor of Computer Science - Software Engineering Stream*

SKILLS

Languages and Frameworks: Java, JavaScript, HTML, CSS, SQL, PHP, Python, C and C++, Node.js, Linux, Unix, XAMPP, TCP/IP Sockets

Course Work: Discrete Structures I and II, Systems Programming, Abstract Data Types and Algorithms, Fundamental Web Applications, Programming Paradigms, Statistical Modeling

PROJECTS

Ravens Roost Management System | HTML, CSS, JavaScript, PHP, SQL

- Developed a comprehensive management system for my previous job at the Ravens Roost Game Lounge, leveraging a full stack approach with front-end technologies (**HTML, CSS, JavaScript**) and back-end technologies (**PHP, SQL**) hosted on **XAMPP**.
- Designed and implemented a user-friendly interface, ensuring seamless interaction and ease of use for both staff and management by applying modern web design principles and best practices.
- Built robust back-end functionality to efficiently handle and store data, incorporating **SQL** for database management and **PHP** for server-side logic, ensuring data integrity and security.

2D Game Simulation in C++ | C++, Linux

- Created a 2d game simulation in **C++** using the **Ubuntu Linux** environment, the game features two main characters escaping from enemies in a dynamically generated environment.
- Integrated a simplified Strategy design pattern, leveraging **polymorphism** and **dynamic binding** in **C++**, to facilitate flexible and interchangeable game strategies for characters, enhancing the game's extensibility and maintainability.
- Ensured robust memory management and error-free code with extensive use of **Valgrind** and **GDB** as debugging tools to detect memory leakage.
- **Overloaded operators** within the collection class template to provide intuitive and streamlined interactions with the game entity collections, improving code readability and operational efficiency.

Advanced-Data Structure Exploration | Java

- Gained proficiency in using and implementing various data structures such as arrays, linked lists, stacks, queues, hash tables, heaps, graphs, and trees (including binary trees, binary search trees, AVL trees, and Red Black trees).
- Implemented and compared sorting algorithms such as quicksort, mergesort, and heapsort, as well as searching algorithms such as binary search, DFS, and BFS to understand their practical applications and efficiency.
- Developed algorithms using concepts of recursion, divide and conquer, greedy techniques, and **dynamic programming** to solve complex problems.
- Emphasized skills in analyzing the time and space complexity of algorithms using Big O notation, and cemented my understanding of the efficiency and scalability of algorithms.

Self Portfolio Website | HTML, CSS, JavaScript

- Engineered an intricate personal portfolio website, serving as a dynamic showcase of my technical prowess and project portfolio within my Computer Science career.
- Executed the website's construction from the ground up, employing **HTML** for structural definition, **CSS** for stylistic customization and layout control, and **JavaScrip**t to enhance interactivity and user engagement.
- Ensured the website's adaptability across a spectrum of devices through responsive design principles, optimizing for various screen sizes and resolutions to enhance accessibility and user experience.

EXPERIENCE

Carleton University, — Ravens Roost Team Member Ottawa, ON August 2023 - April 2024

- Welcomed students and maintained a friendly atmosphere, managed equipment sign-outs, and organized events.
- Communicated effectively with Community Managers to ensure smooth operations and coordinated activities.
- Attended training sessions, adhered to shift procedures, managed inventory, and maintained accurate records of student usage and feedback.
- Collaborated with Community Managers and residence life staff to develop and facilitate programs that enhance the student living and learning experience.