

# Clarence Chau

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## EDUCATION

### University of Toronto

Sep. 2020 – April 2024

*Bachelor of Science – Computer Science, Mathematics and Statistics*

*Toronto, ON*

- Relevant Coursework: Data Structures and Algorithms, Computer Organization and Design, Proofs of Linear Algebra and Matrices, Vector Calculus, Software and Electric Circuits, Software Tools and Systems Programming
- Varsity Badminton (OUA Third Place)

## EXPERIENCE

### Software Developer Intern

May 2023 – April 2024

*Moneris*

*Toronto, ON*

- Will be working with the payment platform team starting May 2023

### Full Stack Developer Intern

June 2022 – August 2022

*Aireum*

*Toronto, ON*

- Developed both the front and back-end of the administrating management system using **ReactJS** and **HTML/CSS**, to showcase and publish national archive material
- Helped build, manage, and store nearly 1 million assets of national archive material, with rights of access given by the government of Canada, fundraising over \$3MM in donations
- Utilizing **Firebase**, coded an asset database manipulation tool by creating a CRUD inspired **REST API**, increasing the updating process by 70%

## PROJECTS

### UTimetable | Java, Gradle, MongoDB

September 2022 – December 2022

- Created a **Java** application for university students to publish their timetable for their friends to see
- Coded an algorithm to compare different user's schedules which prints a schedule of free times slots in a  $O(n \log(n))$  time complexity, 15x faster than a generic  $O(n^2)$  algorithm
- Used **MongoDB** for the back-end, to store the users, timetables, and building locations
- Increased user accessibility by implementing 6 design patterns, along with the 7 Principles of Universal Design

### Personal Website | ReactJS, CSS, Node.js

October 2022 – November 2022

- Built a personal website to present my personal projects
- Used **ReactJS** components to build the framework and personalized how it looks with **CSS**
- Connected the site to **Formspree** using API calls, for users to easily get in contact with me
- Made the site responsive to the user, detecting 3 different window sizes, including mobile devices, and will resize the formatting accordingly

### Meepo Is You | Python

February 2021 – March 2021

- Coded a grid based puzzle game inspired by Baba Is You
- Used **Pygame API** to wrap the SDL library, easing the development process of the game
- Implemented a **LIFO linked lists** to keep track of adjacent connected blocks, manipulating the rules of the game

### Picture Manipulation | Python

January 2021 – February 2021

- Created a Photoshop-like application in **Python** that edits images to however the user wants
- Used **matrix transformations** to create 5 different algorithms in Python to alter the images in different ways
- Gained a deep understanding of **RGBA pixel manipulation** and altering PDF files

### Gungeon | Java

January 2020 – May 2020

- Utilized **Java** and **Greenfoot** to create a dungeon-based shooting game, with different sets of difficulties
- Used of **object oriented programming** to create different types of guns, monsters and dungeon rooms
- Implemented advanced trigonometry and mathematics knowledge to track the trajectories of the bullets

## TECHNICAL SKILLS

**Languages:** Java, Python, C, SQL, JavaScript, HTML/CSS, LaTeX

**Frameworks:** ReactJS, React Native, Node.js, JUnit, Material-UI, MongoDB, Firebase, Logisim

**Developer Tools:** Git, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Eclipse, Postman, Greenfoot

**Libraries:** Bootstrap, React Native Animated, React Hook Form, Prettier, Pygame, Formspree