Iain Mcilveen

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EDUCATION

Bachelor of Science Honour's, Computer Science (Co-op), **CGPA: 11.26/12 (A)**
Carleton University, Ottawa, ON   September 2018 - April 2023

- Awarded 12,000$ entrance scholarship
- Currently learning software engineering, programming paradigms, algorithm time complexity, fundamental data structures and web development

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SKILLS

- Proficient in several programming languages including: **Python**, **Java**, **JavaScript**, and **C**
- Wrote safe concurrent code in **C** using multiple threads to improve the efficiency of the performance of the program and make it more scalable
- Experienced in Front-End web development using **HTML**, **CSS**, and **JavaScript** as well as **React** to write interactive web applications
- Wrote the Back-End for web applications using **Node.js** and **Express** to design and implement scalable **REST API**s
- Designed and implemented a full stack web app which used **MongoDB** and **Mongoose** ODM to store user data with **JWT** to authenticate the user who were trying to access it
- Implemented several advanced data structures in **Java** with performance considerations in mind to find more efficient solutions to problems
- Designed finite state machine based artificial intelligence in **Python** and **Pygame**, to compete in competitions against other similarly designed AI
- Completed course work in relational databases using **SQL**

EXPERIENCE

Teaching Assistant

Carleton University, Ottawa, ON   September 2019 – December 2019

- Held office hours, answering questions and helping students gain an improved understanding of the core fundamental programming concepts
- Led tutorials, explaining programming concepts in front of a group of students and correcting any problems students encounter
- Worked with a team of other Teaching Assistants to complete marking and give feedback in a timely manner

Open House Volunteer

Carleton University, Ottawa, ON   February 2019

- Volunteered at the Carleton University Fall open house to help answer student questions about Carleton's Computer Science program

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PROJECTS

Classify

https://github.com/IainMcilveen/Classify

- Collaboratively developed a hybrid mobile web app using **React** and the Hooks API to pair users based on their courses.
- Made at uOttawa Local Hack Day 2019 using React, **GraphQL**, Apollo

Grid World

https://github.com/IainMcilveen/GridWorld

- Made use of object-oriented programming techniques in **Java** such as inheritance and polymorphism to create an efficient and scalable 2d game engine