

# Marvin Li

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## SUMMARY OF QUALIFICATIONS

- Third-year student at the University of Ottawa pursuing a Bachelor in Software Engineering with a CGPA of 8.6, excelling in key coursework.
- Proficient in a variety of programming languages and modern web/mobile development technologies.
- Demonstrated leadership and teamwork through participating in various collaborative environments.
- Experienced in AI, data structures & algorithms concepts, and full-stack development, delivering impactful and efficient software solutions.
- Adaptable, hardworking, and communicative, with a commitment to continuous learning and problem-solving.

## EDUCATION

### BASc Software Engineering - Year 3

Currently Enrolled

University of Ottawa

CGPA - 8.6

Relevant Coursework -

- CEG 2136 - Computer Architecture I - 100%
- CSI 2110 - Data Structures and Algorithms - 90%
- SEG 2105 - Introduction to Software Engineering - 85%

## SKILLS

**Programming Languages** Python | Java | C++ | C | C# | JavaScript

**Technologies** React.js | Flask | Next.js | Tailwind | Android | Firebase | PostgreSQL | Docker

**Soft Skills** Adaptable | Hard Working | Diligent | Communicative | Confident | Outgoing | Positive

## NOTABLE PROJECTS

### star.stylla.moe - Personal Project

April 2025 - May 2025

TypeScript | Next.js | Python | FastAPI | PostgreSQL

star.stylla.moe

- Built a full-stack web app with an interactive UI that fetches player profiles, character builds, and a complete index of characters, relics, and weapons from third-party APIs.
- Implemented a character leaderboard system that ranks builds across over 100,000 data points using stat-weighted formulas, with efficient server-side aggregation and sorting logic.
- Developed a FastAPI backend to manage API calls, perform real-time score calculations, and handle data persistence with PostgreSQL, efficiently adding and removing game data to ensure quick access and minimal latency.

### Tetris AI - Personal Project

August 1, 2024 - August 31, 2024

C++ | SDL2 | Machine Learning

<https://github.com/iilou/tetr.ai/releases/tag/v1.0.0>

- Developed an advanced Tetris AI capable of being locally and autonomously trained while outperforming 90% of active players when set at a speed of 4 pieces/second after 300 generations of training.
- Engineered the AI model in vanilla C++ utilizing a heuristic-based algorithm to calculate the optimal placement for each Tetris piece, dynamically adapting to future piece sequences and real-time board states.
- Integrated SDL2 to build a comprehensive UI, allowing users to train AI locally with 3 distinct reinforcement strategies, compete against AI opponents at 5 different speeds, and adjust key parameters such as processing depth for up to 4 simultaneous pieces.

### Android Renting App - Team Project

June 8, 2024 - July 24, 2024

Java | Android Studio — SEG 2105

<https://github.com/SEG-2105/project-group-8>

- Led a team of 4 in designing and developing a feature-rich Android application for tenants, landlords, and property managers, streamlining interactions and property management.
- Designed an intuitive and user-friendly interface with Java and Android Studio, implementing a dynamic navigation system that tailored user experiences based on role-specific permissions.
- Architected a scalable and secure backend using Firebase, ensuring robust data management and a highly reliable authentication system for secure user access.

## WORK

### Fisheries and Oceans Canada (DFO)

January 2025 - May 2025

Student Data Analyst

Mississauga, ON

- Migrated large quantities of data across systems, ensuring data integrity, consistency, and compliance with standards.
- Collaborated with cross-departmental teams to address technical challenges in data management and system integration.
- Collaborated within an Agile environment using Azure DevOps for project management, task tracking, and version control, ensuring efficient team coordination and timely delivery of data migration tasks.