

Allan He-Chen

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Education

Toronto Metropolitan University

Toronto, Canada

BSc in Computer Science

Sep 2021 - Exp. Apr 2026

- **GPA:** 4.23/4.33
- **Relevant Courses:** Data Structures and Algorithms, Operating Systems, Linear Algebra, Software Engineering
- First-year Computer Science Award

Experience

Ontario Power Generation

May 2023 - Exp. Dec 2023

Data Analyst Co-op

- Developed and implemented a threaded database query program using pyodbc and openpyxl, reducing processing time from hours to minutes by generating efficient queries for a database with millions of rows.
- Automated data gathering for over 2500 ongoing orders by building a web-scraper around Selenium, resulting in single-handed completion of 3 person work, and 10s of hours of time and effort savings for my team.
- Simulated multiple purchasing scenarios from optimized purchasing decisions using Python and openpyxl. Successfully confirmed over \$100,000 in savings as a direct result of the implemented strategies.

Projects

allanhechen.me Server Stack

May 2023

Linux services and web server

- Configured and administered Ubuntu Server infrastructure, overseeing system configuration, software installation, security updates, and performance optimization, ensuring reliable and secure operations for critical applications.
- Utilized Docker to containerize web applications, enabling streamlined deployment, scalability, and easy management of dependencies, shown by hosting more than 10 services on one machine.
- Implemented Caddy web server to secure web hosting, limit open ports to 80 and 443, redirect all HTTP traffic to HTTPS, automatically generate trusted SSL certificates, and efficiently route subdomains for multiple services.

Serenity

Apr 2023

Note taking REST API

- Designed a relational database consisting of more than 5 tables to support note taking, note sharing, and group management.
- Created a custom JWT middleware for Express, providing a secure way to authenticate and authorize users based on predetermined permissions.
- Routed a RESTful API with Express by exposing different endpoints to perform CRUD operations on the hosted database.

Supplant

Oct 2022

Text substitution web app

- Coordinated ideas and opinions from multiple team members, resulting in a working prototype in under 40 hours.
- Delegated tasks to team members based upon experience and wants, resulting in a good working atmosphere.
- Hosted the project using Django, providing a means for communication between the user interface and the backend.

Skills

Languages Python, Java, C, HTML, CSS, JavaScript, SQL

Tools Excel, Access, ODBC, Docker, Git, Node.js, Express, BASH