

Alexander Shen

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EDUCATION

University of Waterloo

Expected Graduation: **Apr 2027**

Bachelor of Computer Science (Co-op)

Courses: Data Structures, Algorithms, Object-Oriented Programming, Software Engineering, Deep Learning

EXPERIENCE

Returning Software Engineering Intern

Sept 2025 - Dec 2025

Polaris Intelligence

Toronto, Ontario

- Returning to work on website development and contribute to **React** migration efforts.

Software Engineering Intern

Jan 2025 - May 2024

Polaris Intelligence

Toronto, Ontario

- Created visual indicators for **3+ features** using **Javascript, JQuery** to improve **user productivity by 30%**.
- Optimized test script performance using **Python and Selenium**, **improving performance by 80%** through the implementation of **parallel execution utilizing multithreading** in order to **improve resource usage**.
- Developed postal code to address web scraping script featuring **parallel execution** and address matching using **Levenshtein distance** in order to streamline postal code validation and **improve overall data quality**.
- Migrated from **PHP 7 to PHP 8** by resolving compatibility issues and updating Doctrine database queries.

QA Analyst

May 2023 - Aug 2023

JANA Corporation

Aurora, Ontario

- Collaborated with various stakeholders** to determine decimal precision standards to balance between readability of frontend elements and precision determined from risk pipeline calculations.
- Created automation tests covering **40% of regression test cases** using **Selenium and Java**.

Software Engineering Intern

Jun 2022 - Aug 2022

Ministry of Health

Toronto, Ontario

- Created an end-to-end data processing pipeline using **React, Express, Node.js, MongoDB, and RESTful APIs** to automate processing of budget requests and improve **data entry speed by 75%** for users.
- Learned about the **CI/CD Pipeline, OOP principles, monolithic repositories, and Azure DevOps** for project planning and version control while working with developers and business executives.

PROJECTS

[Card Game Deck Builder Website](#) | *JavaScript, MongoDB, Express, Node.js, React, Firebase, AWS, Python*

- Implemented a deck management system using a **RESTful API** and global state management with **Redux** to allow users to handle and browse decks containing images scraped with **Python and BeautifulSoup**.

[Notion-YouTube Music Player](#) | *Python, Bash, AppleScript*

- Designed a set of Python scripts that imitates a music player app utilizing the **YouTube Data API** and **Notion API**, using YouTube to play songs and Notion to store song data.

[BobaShare](#) | *JavaScript, MongoDB, Express, Node.js, React, AWS*

- Won **3rd place** in Bobatalks Hackathon by creating an app to encourage gift-giving and charity using bubble tea.
- Implemented user auth, event handling and payment validation using a **RESTful API** and **Square API**.

TECHNICAL SKILLS

Languages: Typescript, JavaScript, Python, Java, C++, C, SQL, Bash, PHP

Frameworks: Next.js, React, Node.js, AWS, GCP, Docker, MongoDB, Firebase, Tailwind, Bootstrap, jQuery, Git

ACTIVITIES

Incoming Software Engineering Fellow

July 2024 - Aug 2024

Headstarter AI

- Developing 5 AI apps using **Next.js, Pinecone, OpenAPI, and StripeAPI** to solve practical challenges.