# 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

**[Sip and Play Redesign](#)** | Made for Codedex 2024 Hackathon | *Next.JS, Strapi, Tailwind CSS, Three.js, Vercel*
- Designed an intuitive user interface with **Next.js and Three.js** to enhance user experience and user engagement.
- Implemented a user-friendly CMS using **Strapi** to allow the site owner to easily modify events and the menu.

**[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](#)** | BobaTalks Hackathon Winner | *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