Alexander Shen

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EDUCATION

University of Waterloo **April 2027**
Bachelor of Computer Science (Co-op)
Courses: Data Structures, Algorithms, Object-Oriented Programming, Software Engineering

EXPERIENCE

Software Engineer Intern September 2024 - December 2024
Polaris Intelligence *Toronto, Ontario*
- Introduced live reloading and asset-versioning for developer servers using Symfony and Asset Mapper to significantly improve development build times.
- Developed a survey-level search feature using JavaScript and PHP, enabling users to efficiently locate all questions listed under a survey, significantly improving data accessibility and ease of access.

Software Engineer Intern January 2024 - May 2024
Polaris Intelligence *Toronto, Ontario*
- Created visual indicators for 3+ modules using Javascript and JQuery to streamline user actions in querying report data, finding geographic target customers, and analyzing points of interest.
- 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 a web scraper that converts postal codes to addresses using fuzzy searching and Levenshtein distance in order to streamline postal code validation and improve overall data quality.

QA Analyst Intern May 2023 - August 2023
JANA Corporation *Aurora, Ontario*
- Automated testing process for the validation of probabilistic risk models using Selenium and Java by collecting risk calculation results displayed and comparing them to pre-calculated results on Excel.
- Created automation tests covering 40% of regression test cases using Selenium and Java to validate data import features, visual graph displays, and quality of life features.
- Collaborated with stakeholders to create decimal precision standards of pipeline risk calculations to optimize UI readability and result accuracy.

Software Engineer Intern June 2022 - August 2022
Ministry of Health *Toronto, Ontario*
- Created an end-to-end data processing pipeline using React, Express, Node.js, MongoDB 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 Website 🔗 ↗ | Codedex 2024 Hackathon | *Next.JS, Strapi, Tailwind CSS, Three.js, Vercel*
- Developed a website and CMS for the Sip and Play board game cafe using Next.js, Strapi, Tailwind CSS, Three.js and Vercel to showcase the cafe's board game collection, 3D menu, weekly events, and reservation opportunities.

Genshin TCG Deck Manager 🔗 ↗ | *JavaScript, MongoDB, Express, Node.js, React, Firebase, AWS, Python*
- Implemented a deck management website 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 Python scripts to imitate a music player using the YouTube API and Notion API.

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.

TECHNICAL SKILLS

Languages: Typescript, JavaScript, Python, Java, C++, C, Go, SQL, Bash, PHP
Frameworks: Next.js, React, Node.js, AWS, GCP, Docker, MongoDB, Firebase, Tailwind, Bootstrap, jQuery, Flask, Git