

# ESTHER XIN

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## EDUCATION

**University of Waterloo** — BAsC Systems Design Engineering

2020 - 2025

Relevant Courses: Data Structures & Algorithms, Human Factors in Design, Engineering Ergonomics

## SKILLS

**Languages** — GoLang, Python, Java, C++, SQL, JavaScript, TypeScript

**Frameworks** — React, FastAPI, Node.js, Express.js, REST

**Tools** — AWS, MongoDB, GCP, DynamoDB, Redis, Kubernetes, Docker, Terraform, CI/CD, Ansible, Prometheus/Grafana, Git

## EXPERIENCE

**ODAIA** — Software Engineering Intern

Sep - Dec 2023

- Improved application load times by 20% by transitioning AWS Lambda functions to a FastAPI-based architecture, streamlining code management, accelerating deployments, and enabling local debugging with Python, SQL, and React
- Designed and developed a new AWS pipeline that generates and stores metric data in DynamoDB, eliminating hard-coded metrics and improving developer efficiency
- Architected a data report automation tool via AWS state machines and S3 storage, resulting in an 60% reduction in weekly manual labour

**League** — Software Engineering Intern

Jan - Apr 2023

- Reduced monthly infrastructure costs by \$5K by reducing data node sizes and eliminating duplicate backup virtual machines with GCP and Terraform
- Enhanced platform logging efficiency by 30% through migrating from a legacy Fluentd container to Cloud Logging, Prometheus and Grafana
- Managed a distributed Kubernetes cluster in 10+ production and test environments while implementing a CI/CD pipeline using CircleCI and Concourse to deploy large-scale applications

**1Password** — Software Engineering Intern

May - Aug 2022

- Led the development of a single sign-on (SSO) admin tool that improved data visibility for 400+ internal developers and increased user adoption rate by 20%
- Constructed an end-to-end system for SSO user account recovery including identity verification, recovery token management and database re-encryption using GoLang, React, Redis and MySQL
- Launched SSO feature into beta after extensive penetration testing, resulting in an 80% adoption rate among interviewed companies

**1Password** — Software Engineering Intern

Sep - Dec 2021

- Designed and architected a new localization workflow using GoLang and a REST API to address validation inconsistencies in legacy code
- Implemented an automated CI/CD pipeline and Slack release bot, cutting localization time by over 50% for internal developers
- Reduced post-release bug reports by 60% through increasing unit test coverage from 30% to 75% using Go Mocking frameworks to test interfaces and API calls

**Year Zero Studios** — Software Engineering Intern

Jan - Apr 2021

- Increased user acquisition by over 100% by architecting 5+ highly requested customer features using React, Python, Express.js, REST APIs, and Firebase

## LEADERSHIP

**Glenforest STEM** — Vice-President

Jul 2019 - Jun 2020

- Organized the largest student-run conference in Canada with over 1,200 participants and gained recognition from Justin Trudeau