

# VICTOR ZHENG

@ v2zheng@uwaterloo.ca

in linkedin.com/in/vzheng1

github.com/victorzheng02

globe victor-zheng.com

## EDUCATION

Bachelor of Computer Science

Sep 2020 - Apr 2025

University of Waterloo | Cumulative GPA: 3.8/4

## SKILLS AND CERTIFICATIONS

Languages: TypeScript, JavaScript, Python, Go, SQL, C++, R, Bash, HTML, CSS

Tools and Technologies: React, Node.js, Express, GraphQL, MongoDB, Redis, AWS, Git, Flask

Certifications: AWS Certified Developer - Associate, Google Data Analytics Certificate

## EXPERIENCE

Intuit

May 2023 - Aug 2023

Software Engineer Intern

- Created several end-to-end features using **React**, **TypeScript**, and **Go** for Intuit's cloud development environments (CDE) platform to manage remote workspaces, reducing average environment setup time for 150+ developers by 78%
- Optimized database layer by adding indexes and an in-memory cache through **SQL** and **Go** to speed up retrieval of existing workspaces and auth tokens, reducing average response times by up to 82% for critical endpoints
- Architected CDE auth layer with AWS IAM roles using **Kubernetes** and the **AWS SDK**, enabling **Kubernetes** pods to dynamically fetch secrets for workspaces and removing previously hard-coded secrets within pods
- Introduced real-time updates for workspace statuses through **SQL** triggers and **AWS SQS** long polling, replacing the expensive short polling mechanism and reducing average status update time on frontend by 70%

Vendia

Sep 2022 - Apr 2023

Software Engineer Intern

- Engineered a data pipeline to efficiently ingest over 1.2 million customer records from a major airline alliance into Vendia's platform using **TypeScript**, **AWS Lambda**, **DynamoDB**, and **CloudFormation**
- Published an internal debugging tool to seed, trace, and replay data changes with **Node.js** and **DynamoDB**, speeding up the development cycle for the data pipeline by 40%
- Automated mapping validation between Vendia and customer database schemas through **GraphQL** introspection to guarantee seamless integrations of schema changes

Tradable Bits

Jan 2022 - Apr 2022

Full Stack Developer Intern

- Implemented live video banners into the Toronto Raptors' livestreaming platform through **WebSockets** to serve real-time game highlights to an average of 6,500 concurrent viewers
- Spearheaded the creation of an automated email system to send emails of customized marketing data using **Python** and **SQL**, saving over 30 clients 2 hours per week of manual report creation
- Developed a new customizable marketing campaign with **JavaScript** for multiple international music companies to allow fans to pre-save songs on Spotify and Apple Music using **OAuth 2.0**

1Password

May 2021 - Aug 2021

Software Developer Intern

- Led the architecture of the new **OAuth 2.0** flow implemented in multiple third-party integrations used by more than 7,700 daily active accounts with **TypeScript**, **Go**, and **Redis**, preventing CSRF and authorization code injection attacks
- Redesigned custom account group permissions for fine-grained access control through bitmasking with **React** and **TypeScript** to prevent invalid permission configurations, resolving customer complaints for more than 1,400 users

## PROJECTS

WATonomous Finance System

Sep 2022 - Present

- Created a finance system for an 80-student autonomous vehicle design team to manage funding and purchases, spearheading the database design and system architecture through **JavaScript**, **React**, **Node.js**, and **MongoDB**

UW Blueprint - Rowan House Course Platform

May 2022 - Oct 2022

- Implemented customizable lesson components using **React** and **TypeScript** in a course builder for Rowan House Society, a women's emergency shelter, saving \$9,750 per year from their previous paid course builder