

# KHOI NGUYEN

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## EDUCATION

University of Toronto

September 2021 - May 2026

Honours B.Sc. in Computer Science & Mathematics

GPA: 3.58/4.00

*Relevant Courses:* Software Design, Data Structures and Algorithms, Operating Systems, Parallel Programming, Database System and Technologies, Scalable Computing, Computer Architecture, Computational Linguistics, Compilers

## SKILLS

Computer Languages

Java, Go, C, C++, Python, Ruby, Perl, SQL, Shell, Bash, Rust, Javascript/Typescript

Frameworks and Technologies

React.js, Svelte.js, Tailwind CSS, FastAPI, Flask, Springboot, Pytorch, MBED RTOS, Express.js/Node.js, MySQL, PostgreSQL, SQLite,

Docker, CUDA, Redis, AWS(S3, IoT Core, EC2, RDS, MSK), Linux/Unix

Tools

Git, perforce, jenkins, gdb, valgrind, gcc, Agile methodologies, OOP

## WORK EXPERIENCE

AMD (Advanced Micro Devices)

May 2024 - August 2025

*SOC Design Verification Engineering Intern*

*Markham, ON*

- Improved 300% performance on LSF Monitor alerting and dashboard using **Go**, **Redis**, **Svelte/Sveltekit**, and **Ruby** for managing jobs running on IBM LSF used by 200+ team members.
- Designed, implemented, and published an internal paper for the 'Matrix' event driven architecture "AI" automation framework in **Go**, **RabbitMQ** and **SQLite** to automate communication and debug for 100+ engineers.
- Assisted in running, and improving sanity and regression automated SOC verification test system by 27%, built using **Ruby**, **Python**, **C++**, **React** and running on **Jenkins** for AMD's biggest project ever.

Nexle Corporation

June 2022 - August 2022

*Software Developer (Intern)*

*Ho Chi Minh City, Vietnam*

- Programmed the front-end of a CMS for an EMEA client using **React** and **Redux**
- Designed and built the back-end, and APIs of a fitness app with 1,000+ users using **Node.js**, and **MySQL**
- Debugged 20+ old bugs, and bottlenecks on existing projects on both **React** front-end and **Express.js**, **Java Spring Boot** back-end, tested new code for bugs reducing the chance of application breaking bugs.

XtayPro Canada

July 2023 - June 2024

*Software Developer*

*Toronto, ON*

- Designed and deployed the XTayPro Canada website using **Next.js** and **Tailwind CSS** for app with 150+ users.
- Supported 10 person team by setting up GitHub, Trello, and hosting on Digital Ocean with Github Actions for CI/CD

## PROJECTS

DynamoHub

May 2025 - August 2025

- Lead a team of 8 students to develop an AI traffic management platform for *urbandynamo.com*
- Designed a real time system using object-oriented programming from data ingestion through sensors and Jetson Nano through to **AWS** and **Flask** backend
- Built and tested the MVP of the edge compute unit (**Python**, **Docker**) with data ingestion through to AWS IoT Core
- Connected **Flask**, **SocketIO**, **AWS MSK (Kafka)**, and **PostgreSQL** backend for realtime updates

kedit - shared text editor

October 2025 - Current

- Built my personal text editor with implementation of Rope data structures using **Rust** with inspiration from **Vim**.
- Planned to support CRDT terminal editing through sharing a server to both work on a file asynchronously.