

KHOI NGUYEN

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EDUCATION

University of Toronto

Honours B.Sc. in Computer Science & Mathematics
GPA: 3.58/4.00

September 2021 - May 2026

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, Python, C, C++, Go, Ruby, Perl, SQL, Shell, Bash, 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, perfuse, jenkins, gdb, valgrind, gcc, Agile methodologies, OOP

WORK EXPERIENCE

AMD (Advanced Micro Devices)

Design Verification Engineering Intern

May 2024 - August 2025

Markham, ON

- Improved performance on LSF Monitor alerting and dashboard using **Go**, **Redis**, **Svelte/Sveltekit**, and **Ruby** for managing jobs running on IBM LSF.
- 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.
- Proposed and built an MVP of an internal Jira Bug Tracker using **Python/FastAPI** backend and **React** frontend.
- Assisted in running, and improving sanity and regression, built using **Ruby**, **Python**, **C++**, **React** and runs on **Jenkins**.

Nexle Corporation

Software Developer (Intern)

June 2022 - August 2022

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

Software Developer

July 2023 - June 2024

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

Guitar Tuner

August 2025 - August 2025

- Idealized and built a guitar tuner with 4 group members from scratch using a STM32 board with MBED RTOS
- Added display logic with FFT for real-time processing of live sound data