

Larry Chen

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EDUCATION

University of Waterloo

Waterloo, ON

Candidate for Bachelor of Computer Science

September 2022 – May 2027

- Cumulative GPA: 3.9 / 4.0
- Relevant Courses: Object-Oriented Software Development, Data Structures, Algorithms, Operating Systems

EXPERIENCE

Software Engineer – Compilers

January 2025 – April 2025

Huawei Technologies

Toronto, ON

- Contributed to Huawei's Ascend compiler using **C++**, **Clang**, and **Linux**, with focus on improving front-end compilation and fine-tuning **MLIR/LLVM** code optimization
- Developed multiple **MLIR** passes to enhance performance, extend functionality, and facilitate dialect lowering
- Researched compiler improvements by reading technical papers, studying IR, and writing technical documentation
- Resolved compiler bugs using the **MLIR API**, enabling **27** previously failing CI test cases to pass

Software Developer Intern

May 2024 – August 2024

Systems With Intelligence

Toronto, ON

- Furthered development of a **React Native** mobile app (available as SWI-IoT on iOS and Android) built with Node.js, Metro, and Xcode that configures and interacts with **9,000+** surveillance cameras in electrical substations
- Developed an interactive map leveraging the **Google Maps API** that plots users' cameras on a visual interface
- Added backend routes to our API using **Express.js** that allow the app to retrieve information from the database
- Spearheaded the app's unit testing framework using Jest and increased test coverage from **0%** to **59%**
- Updated the BitBucket CI/CD pipeline and implemented **20+** E2E tests with Cypress and React Testing Library

Full-Stack Software Developer

September 2023 – December 2023

University of Waterloo - Faculty of Engineering

Waterloo, ON

- Developed a two-factor authentication service and a file sharing web application using **React** with web hosting managed by **Firebase** and database management handled with **MongoDB** and **Cloud Firestore**
- Established a webhook on our Firebase server using **Node.js**, **Express.js**, **Postman**, and the Stripe API that monitors and handles customer payments, invoices, and subscriptions with a success rate of **99.7%**
- Set up a CI/CD pipeline using GitLab and PowerShell to run **170+** unit and integration tests before deployment
- Updated a 2FA Android app using **Kotlin** and Android Studio, resulting in a **100%** reduction in crashes

Software Engineer

September 2022 – April 2023

UW VEX U Robotics Team

Waterloo, ON

- Programmed an 18" tall robot using **C++** that qualified for the 2023 VEX Robotics World Championship
- Designed a PID feedback control algorithm that allowed the robot's flywheel to achieve **3000** rotations per minute
- Developed a color detection script on **Linux** and Nvidia's Jetson Nano, with **95%** color identification accuracy

PROJECTS

🐙 TuringSketch | *Python, AI* | [Demo](#)

January 2025 – January 2025

- Developed an online multiplayer drawing game using **Python**, where players guess which drawing is AI-generated

🐙 EthPay | *React Native, TypeScript, MongoDB, Figma, Expo*

June 2024 – August 2024

- Designed and built a mobile app using **React Native** that uses crypto to simplify conversion between currencies

🐙 Developer Portfolio | *React, JavaScript, GitHub Actions* | chenlarry.com

April 2023 – August 2024

- Developed an authentic **React** application using **Node.js** that presents my resume on a stylish web page

TECHNICAL SKILLS

Languages: C/C++, JavaScript, TypeScript, Python, HTML, CSS, R, Bash, Kotlin, Java, SQL, YAML

Frameworks: React, React Native, Node.js, Express.js, REST APIs, Jest, Cypress, LLVM, MLIR

Tools: Firebase, AWS, MongoDB, Clang, Git, GitHub, GitLab, Linux, SSH, Jira, BitBucket, VS Code, Android Studio, Xcode, Eclipse, NetBeans, PowerShell, Postman, CI/CD, Figma, Expo, Metro, LaTeX