

Harry Chen

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EDUCATION

University of British Columbia

Candidate for Bachelor of Computer Science - Co-op

Vancouver, BC

Sept. 2023 – 2026 (expected grad.)

University of Waterloo

Bachelor of Applied Science - Co-op

Waterloo, ON

Sept. 2018 – Apr. 2023

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, SQL, HTML/CSS

Frameworks: React, Express.js, Node.js, React Native, MySQL, MongoDB, Firebase, EJS, OpenAI API

EXPERIENCE

Firmware Engineer

Atlas Power Technologies

May. 2024 - current

Abbotsford, BC

- Currently developing firmware tools for supercapacitor energy storage in Python.

Frontend Developer

NCR Voyix

Sept. 2022 - Dec. 2022

Waterloo, ON

- Developed, tested, and optimized a core interactive call component with remote functionality and 80% decreased call latency to connect customers to virtual tellers in a commercial ATM banking app using React and JavaScript.
- Streamlined implementation of testing suite by modernizing archaic unit tests, increasing code coverage to 100%.
- Fixed over 50 critical and high risk Sonar errors efficiently, reducing technical debt by an estimated 80 hours.
- Optimized frontend menu icons and components for redundancy and standardization to condense bundle size.

Site Plan Design Engineer

SCS Consulting Group

Jan. 2022 - Apr. 2022

Markham, ON

- Developed custom-coded functions and smart labeling systems to expedite model setup in modeling software.
- Enhanced information organization in the design standard database, reducing project turnover time.
- Leveraged Civil3D, AutoCAD, Excel VBA, and Land Development Toolkits to meet tight design deadlines.

PROJECTS

TrailGrail | *React, MongoDB, Express.js, Node.js, Javascript*

- Designed website for users with interests in hiking and exploring to share trails and locations with each other.
- Implemented account authentication system, allowing users to submit & delete trails with their locations, photos, names, and details and also reviews on other submitted trails including a star score and comment.
- Secured via input validation against HTML injections and hashing & salting of account usernames and passwords.

Atomic Habit Builder | *React, MongoDB, Express.js, Node.js, OpenAI API*

- Uses AI recommendation systems to foster actionable habits from simple prompts in a full-stack web app.
- Applied Atomic Habits principles via OpenAI for prompt generation to enhance habit formation alignment.
- Presented in the Self-Improvement category at BCS Hacks 2024 and received finalist honours.

Mental Health Journal App | *React Native, Express.js, Node.js, MySQL*

- Developed a versatile cross-platform app for Android, iOS, and Web, dedicated to monitoring goals, mental health, progress, and mood through daily/weekly journaling.
- Empowers users by tracking goal progress and offering supportive insights into positive mental health trends.
- Makes use of push notifications to keep users on track to accomplish progress regularly.

Dynamic Traffic Coordination Design for Arterial Roadways | *Python*

- Designed an algorithm in Python to optimize traffic light offset coordination for platoons of vehicles.
- Successfully reduced automobile queuing lengths at intersections by 50% and travel delay time by 9.7% in traffic modelling simulations, with projections of over 15% improvement if optimized in longer runs.
- Presented as Engineering Fourth Year Design Project and received finalist award for transportation category.