

TECHNICAL SKILLS

Programming/Scripting C/C++, Java, Javascript, Python, SQL, Racket/Lisp, Haskell, R, Bash
Tools/Technologies HTML/CSS, Bootstrap, Git, LaTeX, Firebase, MySQL, React.js, Node.js, UML

EXPERIENCE

Cisco Systems Jan, 2022 - April, 2022
Software Engineer Ottawa, ON

- Collaborated with the Mass-Scale Infrastructure Group to work on XR development for Layer 3 forwarding of the Cisco 8000 router.
- Ensured consistent and stable feature releases for Ip-in-Ip Encapsulation/Decapsulation tunnels.
- Improved and enabled over 30% of the inactive functions for a part of the internal Layer 3 forwarding information database.
- Improved the run time of a traffic generator by 50% and increased the connection speed for said traffic generator.
- Replaced manual verification by designing a system for router CLI verification using Google's TextFSM.

Software Developer Aug, 2021 - Current
Waterloop, a hyperloop team Waterloo, ON

- Independently designed a built-in self testing interface used on the hyperloop pods reducing testing time by 40%.
- Collaborated with other team members to develop and rigorously test the firmware using tools and technologies including C, Python, Git, GitHub.

System Integration Coordinator April, 2021 - Aug, 2021
Strauss Event & Association Management Winnipeg, MB

- Developed documentation revolving project management software(ClickUp and Asana) for national associations.
- Saved the company \$3000 every quarter by designing a script to automate report generation using SQL, eliminating temp workers.
- Reduced quarterly report time by one week for HR managers by implementing a Python application to query billable information.

PROJECTS

QuickChat, Real-time Chat Application <https://romantic-heyrovsky-3c637f.netlify.app>

- A chat room web app that allows users to join a room with a room key both anonymously or as a sign-in user.
- Developed a real time chat application utilizing technologies including **React and Firebase**.
- Provides optional authentication methods including Google Sign-in or Username and Password from the webapp.

kefancao.com, My portfolio website! <https://kefancao.com>

- A portfolio website showcasing myself and some of my skills and projects.
- Utilizes **CSS 3D** transformations to create animated objects such as business cards and project cubes.
- Applied concepts of Linear Algebra and Trigonometry in combination with **React** to achieve animation.

QuickType, Typing Test Web App <https://quicktype.tech>

- Designed a typing test website that supports timed typing tests which gives an accurate adjusted word per minute to the user.
- Incorporates dynamic styling to indicate if typed correctly.
- Created using a combination of **React and Firebase** (to store user history).

River Deliver, Founder (2020 Summer Company Winner) July 2020 — Aug 2020

- A grocery delivery/errands company, winner of a \$3000 Entrepreneurship Fund from a pool of 70 applicants.
- Developed a fully functional ordering web app using React, Firebase, and Email.js.
- Attracted over 100 users/customers throughout the summer.

EDUCATION

Bachelor of Computer Science, University of Waterloo, GPA: 93% Sept 2020 — June, 2025
Coursework: Object-Oriented Software Development - 100%, Advanced Algorithmic Design - 100%, Functional Program Design - 96%, Sequential Programs - 99%, Linear Algebra - 97%

AWARDS & HONORS

2020 Ontario Entrepreneurship Award (\$3,000); President's Scholarship(\$2,000)