

EDUCATION

University of Waterloo, Bachelor of Computer Science - 2024 (4.0 GPA, Dean's Honours, K.D. Fryer Gold Medal Recipient)
Courseworks: Machine Learning, Databases, Security, Networks, Operating Systems, Parallel Programming, Algorithms
Extracurriculars: Varsity Men's Rowing

TECHNICAL SKILLS

Programming Languages Python, C++, C, Go, Typescript, Javascript, C#, Java, Kotlin, SQL, Racket, R, Bash
Tools & Technology GraphQL, MySQL, React.js, Node.js, HTML, CSS, AWS, GCP, Git, LaTeX, Firebase, Neo4j, New Relic

EXPERIENCE

Included Health **San Francisco, California**
Software Engineer **Oct, 2024 - Current**

- Led the development of a comprehensive notification settings page to enhance user control over communication preferences.
- Leveraged the Salesforce Notifications API to facilitate real-time notification dispatch to millions of users.

X Corp **San Francisco, California**
Media Software Engineer **May, 2024 - Sept, 2024**

- Presented to stakeholders weekly on the design and implementation of an **in-conference chat** feature on X conferences using **React**.
- Engineered a proxy server to translate requests for all **WebRTC** related X services, increasing X conference participants by **100%**.
- Developed a **chat moderation API** which enabled millions of broadcasters to moderate inappropriate comments and spam.
- Overhauled the chat API backend for conferences, **optimizing the inappropriate content filter and spam filter**.

Included Health **San Francisco, California**
Software Engineer **Jan, 2024 - Apr, 2024**

- Spearheaded the design of a new **notifications** API to provide push, email, and SMS notifications through to clients.
- Implemented a templating engine to allow templated emails to be sent to clients through the aforementioned notifications API.
- Enabled a **scheduling** mechanism via **Temporal** in the notification service to deliver notifications at the desired time.
- Provided key marketing insights by instrumenting the notifications service and streaming analytics to **Amplitude**.

Terrace.fi - YCombinator S22, DeFi Trading **New York, New York**
Quantitative Software Engineer **May, 2023 - Aug, 2023**

- Engineered various custom strategies and **algorithms to detect arbitrage** opportunities across different exchanges.
- Integrated Coinbase and Binance APIs for **real-time order book streaming** and trading on Terrace using **Golang**.
- Designed an liquidity-price optimal algorithm to determine the most **cost-efficient order execution** route(s) for large volume orders.
- Instrumented an API using **GraphQL** that provides the transaction cost for different execution speeds on 9 different blockchains.

Capital One **Toronto, Ontario**
Infrastructure Software Engineer **Jan, 2023 - Apr, 2023**

- Won first place** in a company hackathon of more than 2500 engineers by pioneering a **machine learning** incident resolution system.
- Led a team of engineers to implement an **advanced observability architecture** across all Canadian software compartments.
- Enabled core observability tool support for **Go** and **Javascript** through **New Relic** and **distributed tracing**.

Cisco Systems **Ottawa, Ontario**
Infrastructure Software Engineer **Jan, 2022 - Apr, 2022**

- Ensured stable and consistent feature release for **Ip-in-Ip Encapsulation/Decapsulation tunnels** through Agile methodologies.
- Achieved a **200%** speed-up on a traffic generator and increased the connection speed of said generator by **50%**.
- Implemented an automatic testing workflow in **C** for router CLI verification which completely **relieved manual testing**.

Waterloop - Hyperloop Team **Waterloo, Ontario**
Software Engineer **Aug, 2021 - Dec, 2021**

- Independently designed a **built-in self testing interface** used on the hyperloop pods to reduce electrical testing time by **40%**.
- Employed systems design techniques in a command-line tool that allowed engineers to take measurements with **high scalability**.
- Collaborated with other team members to rigorously test the firmware using tools and technologies including **C++, Python, and Git**.

AWARDS & HONORS

2024 K.D. Fryer Gold Medal (One awarded per graduating class)
2023 Gold Medal at Ontario University Athletics (OUA) Rowing Regatta (Double Scull)
2022 Ontario Entrepreneurship Award (\$3,000); President's Scholarship (\$2,000); International Experience Award (\$2,500)