

# Steven Bai

(+1) 416-768-2818 | [s2bai@uwaterloo.ca](mailto:s2bai@uwaterloo.ca) | [stevenbai.ca](http://stevenbai.ca) | [LinkedIn](#) | [GitHub](#)

## TECHNICAL SKILLS

**Languages:** Python, C/C++, Java, JavaScript, Typescript, Ruby, HTML/CSS, SQL, Kotlin

**Frameworks:** React, React Native, Next.js, Angular, Node.js, Express, Ruby on Rails, Tailwind CSS

**Technologies:** AWS, Redshift, Airflow, Kafka, Docker, Kubernetes, Jenkins, Firebase, Supabase, PostgreSQL, MongoDB, GraphQL, OpenAI, Git, Linux, Postman, Figma, TortoiseSVN, Heroku

## EDUCATION

**University of Waterloo**

Sept. 2022 – April 2027

*Honours Bachelor of Computer Science*

*Waterloo, ON*

- PureFacts PureScholars Award in Mathematics Recipient (2022)
- Courses: Data Structures and Algorithms, Sequential Programming, Object-Oriented Programming, Mobile Application Development, Operating Systems, Combinatorics, Graph Theory, Statistics, Calculus, Linear Algebra

## EXPERIENCE

**Wealthsimple**

May 2025 – Aug 2025

*Software Engineer Intern*

*Toronto, ON*

- Architected an automated alerting system using **Airflow DAGs** with **SQL** on **Redshift**, sending proactive **Slack notifications** to advisors and achieving **80% engagement rates**.
- Developed a scalable portfolio fee calculation service with **Kafka (publisher/consumer pattern)** + **Rails**, automating rate updates for **600+ advisory clients with \$300M+ AUM**.
- Optimized background processing with **Sidekiq**, enabling scalable messaging and scheduled rate updates.

**Constant Contact**

Jan 2025 – Apr 2025

*Software Developer Intern*

*Kitchener, ON*

- Implemented secure file processing with **S3 presigned URLs**, **SQS queues**, and **AWS Lambda** for event-driven enforcement.
- Integrated AI-powered bulk import system on **AWS EKS** with **Bedrock**, classifying **80M+ contacts/month**.
- Standardized **AWS Lambda** deployments with **Docker**, **ECR**, and **CloudFormation** to enable versioned CI/CD, improving release reliability and observability.
- Created unit tests with **Mockito** + **JUnit5**, validating high-complexity business logic.

**Uncaught Exception Inc.**

May 2024 – Aug 2024

*Software Engineer Intern*

*Vancouver, BC*

- Scaled **AlgoMonster** platform to **5K+ Daily Users** using **Next.js**, **Firebase**, and **AWS ECS/EC2/S3**.
- Implemented **Firebase A/B testing** with **Amplitude** + **Hotjar**, boosting subscription conversion **3x**.
- Streamlined **CI/CD** with integration tests in **GitHub Actions** + **Docker** for Next.js deployments.
- Built AI-driven content pipelines with **Python**, **Pandas**, **OpenAI API**, **Manim**, automating article/video generation and improving engagement metrics (**-20% bounce rate**, **+50% YouTube traffic**).

**Rich Media**

May 2023 – Aug 2023

*Full Stack Developer Intern*

*Toronto, ON*

- Led Agile development of **Scotiabank credit card planner** and **TD mortgage calculator** with **Angular** + **Jenkins**, used by **thousands daily**.
- Built **TypeScript** + **Playwright** asset extraction tool, cutting prototyping time by **1 hour per iteration**.
- Resolved **20+ critical bugs** during cross-device testing, tracked via **Bugzilla**.

**iContribute**

Mar 2021 – Aug 2021

*Frontend Developer Intern*

*Ottawa, ON (Remote)*

- Built a cross-platform app using **React Native** and **Firebase**, enabling **58+ partner organizations** to connect with **1000+ users** for remote and in-person volunteer opportunities during the pandemic.