Steven Bai

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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 2026
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 automated alert system, processing financial events and milestones from **Redshift** data warehouse via **Airflow DAGs**, sending proactive Slack notifications to Wealthsimple advisors to improve client engagement.
- Built portfolio management fee calculation service and **Kafka** event publishing system using **Ruby on Rails** for Wealthsimple Advisory Services, automating rate updates for 600+ clients with a combined **$250M+** AUM.
- Developed **React Native** components for **Contentful CMS** with **Redux** state management, enabling dynamic content rendering in mobile app for the Wealthsimple Advisory Services onboarding.

Constant Contact　　　　　　　　　　　　　　　　　　　　　　　　　Jan 2025 – April 2025
Software Developer Intern　　　　　　　　　　　　　　　　　　　　　　　　　*Kitchener, ON*

- Implementing secure and efficient file processing using **Amazon S3 presigned URLs** and **SQS** message queues for controlled access enforcement. Using **AWS Lambda** for event-driven processing and **AWS CloudFormation** for infrastructure automation.
- Integrated an AI-powered bulk import system processing 80M contacts/month, leveraging **AWS Bedrock** for intelligent data classification and **AWS EKS** with **Kubernetes** for scalable orchestration
- Developed unit tests for the contact imports service layer and API endpoints using **Mockito** and **JUnit5**, ensuring accurate validation of business logic and coverage for high cyclomatic complexity.

Uncaught Exception Inc　　　　　　　　　　　　　　　　　　　　　　　May 2024 – Aug 2024
Software Engineer Intern　　　　　　　　　　　　　　　　　　　　　　　　　*Vancouver, BC*

- Built and optimized **AlgoMonster**, a platform for data structures and algorithm content, practice problems and learning tools, using **Next.js**, **Firebase** and **AWS ECS, EC2** and **S3**, scaling to **5,000+** daily users worldwide.
- Implemented **A/B testing** frameworks using **Firebase**, and integrated **Amplitude** analytics with **Hotjar** heatmaps to evaluate feature performance, increasing subscription page conversion rate by over **5 times**.
- Streamlined **CI/CD** by implementing integration testing for NextJS using **GitHub Actions** and **Docker**.
- Built AI-driven content creation pipelines using **Python**, **Pandas**, **OpenAI API**, and **Manim**, generating SEO optimized articles and videos, reducing bounce rates by **20%** and boosting YouTube traffic by **50%**.

Rich Media　　　　　　　　　　　　　　　　　　　　　　　　　　May 2023 – August 2023
Full Stack Developer Intern　　　　　　　　　　　　　　　　　　　　　　　　　*Toronto, ON*

- Led **Lean-Agile** development of credit card planner for **Scotiabank** and mortgage calculator for **TD Bank** using **Angular** and **Jenkins** for **CI/CD**. Used by **thousands** of daily banking and insurance users.
- Developed an asset extraction tool using **TypeScript** and **Playwright** to scrape fonts, images, and HTML from banking/insurance tool websites, saving 1 hour each time for rapid prototyping.
- Resolved **20+** critical bugs while conducting cross-device testing, with **Bugzilla** for tracking and collaborating.