

Steven Bai

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TECHNICAL SKILLS

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

Frameworks: React, React Native, Next.js, Angular, Node.js, Express, Tailwind CSS

Technologies: AWS, Docker, Jenkins, Firebase, Supabase, PostgreSQL, MongoDB, GraphQL, OpenAI, TortoiseSVN, Heroku, Git, Linux, Postman, Figma

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, Operating Systems, Combinatorics, Graph Theory, Statistics, Calculus, Linear Algebra

EXPERIENCE

Constant Contact

Jan 2025 – April 2025

Software Developer Intern

Kitchener, ON

- Joining the Innovation Lab Team to contribute to the development of cutting-edge email marketing solutions.

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** pipelines with **GitHub Actions** and **Docker**, cutting deployment times by 30%.
- 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%**.

Datacurve YC W24

March 2024 – May 2024

Data Engineer

San Francisco, CA

- Trained generative AI models by curating hundreds of complex coding datasets for **Cohere's Coral AI** model.
- Debugged complex **C/C++** programs and Leetcode-Hard rated **Python** problems to identify AI model errors and improve accuracy with data relabelling.
- Collaborated with 50+ team members to created image-to-code datasets using **React** and **Tailwind CSS**.

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.

iContribute

March 2021 – August 2021

Frontend Developer Intern

Ottawa, ON

- Built a cross-platform app using **React Native** and **Firebase**, enabling 58+ partner organizations to connect with 1000+ active users for remote and in-person volunteer opportunities during the pandemic.
- Designed 15+ responsive user interfaces and components with **MUI** and **Figma**, improving **UI/UX** and gained 20+ weekly matches for volunteering.

PROJECTS

Chess Machine

Nov 2023 - Dec 2023

- Collaborated with a team to develop a fully-functioning chess game in **C++** using **OOP** principles, **MVC**, and **Observer** patterns for 2-player and AI modes.
- Implemented a **Chess Machine** with skill level of 1200+ using a Minimax algorithm optimized with alpha-beta pruning, reducing computation time from 10 seconds to 2 seconds on depth level 5.