Steven Bai

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TECHNICAL SKILLS

Languages: C/C++, Java, JavaScript, Typescript, HTML/CSS, Python, SQL, Kotlin
Technologies: React/React Native, NextJS, OpenAI, RestAPI, Tailwind CSS, Node, Express, Angular, MongoDB, AWS, PostgreSQL, GraphQL, TortoiseSVN, Jenkins, Heroku, Firebase, Docker.
Concepts: Agile/Scrum, Lean, Frontend, Backend, Full Stack Development, CI/CD, UI/UX, Competitive Programming.

EDUCATION

University of Waterloo   Waterloo, ON
Honours Bachelor of Computer Science   *Sept. 2022 – April 2026*

- 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*

- Incoming Developer on Innovation Lab Team!

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

- Built and optimized **AlgoMonster**, a platform for DSA content, practice problems, solution editorials, and learning tools using **NextJS**, **Firebase** with **A/B testing**, **AWS ECS** and **S3**, **Amplitude** analytics and **Github Actions CI/CD**, reaching **5000+** daily users.
- Developed an **AI-driven** workflow tool using **Python scripting** and **OpenAI API** to deploy **SEO**-optimized interview guides for companies like Apple and Meta, gaining 100K impressions and reducing bounce rates by **20%**.
- Created a production pipeline for Systems Design and DSA video tutorials using **Manim**, saving thousands of hours in video creation and increased external traffic from YouTube by **50%**.

Datacurve (YC W24)   March 2024 – May 2024
Data Engineer   *San Francisco, CA (remote)*

- 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 (remote)*

- 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.