

Sam Bai

Full-Stack Software Engineer
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Professional Summary

Full-stack developer building production SaaS with Next.js 16, TypeScript, and modern backends. Created a job tracking system (actively using it for this search), a task management platform with real-time collaboration, and developed features for a community transport platform during a 4-month internship. 2024 graduate with end-to-end delivery experience from database design through deployment.

Technical Skills

Languages: TypeScript, JavaScript (ES6+), Python, C#, SQL, HTML5, CSS3

Frontend: React.js, Next.js (App Router), Tailwind CSS, Shadcn, Framer Motion, GSAP, dnd-kit

Backend: Supabase (PostgreSQL + RLS), MongoDB Atlas, Upstash Redis, Node.js, Express.js, Clerk, Better-Auth, Zod

Tools & Platforms: Git/GitHub, VS Code, Vercel, Docker, Selenium (Python & C#)

Dev Tools & Assistants: Claude, Perplexity, Google Antigravity

Testing Tools: Playwright, Vitest

Methodologies: Agile/Scrum, REST APIs, Responsive Design, Browser Automation, Database Design

Key Projects

Job Application Tracker | Full-Stack Developer | [Live Demo](#) | [Source Code](#)

Tech Stack: Next.js 16, MongoDB Atlas, Better-Auth, GSAP, Framer Motion, Upstash Redis

- Built a production job tracking SaaS to solve my own problem during job search, now actively using it to manage my applications across 4 hiring stages. Designed a Kanban-style interface with customizable workflow columns, priority management, and MongoDB Atlas for flexible schema handling.
- Implemented rate limiting via Upstash Redis to protect API endpoints from abuse
- Integrated better-auth for lightweight OAuth, showcasing flexibility beyond Clerk
- Developed an animated landing page featuring GSAP ScrollTrigger horizontal scroll effects, infinite logo carousel, and bento grid layouts

Task Management Platform | Full-Stack Developer | [Live Demo](#) | [Source Code](#)

Tech Stack: Next.js 16 (App Router), Supabase (PostgreSQL + Realtime), Clerk, Stripe, TypeScript, Tailwind CSS, Shadcn, dnd-kit

- Engineered a production-ready task management SaaS (Trello alternative) with subscription billing, evolving an MVP into a feature-rich product with 100+ commits and continuous UI/UX iteration based on testing feedback
- Implemented drag-and-drop task management with optimistic UI for a fluid user experience, improving smoothness and reliability of board and task interactions using dnd-kit
- Designed and refined Supabase Row Level Security (RLS) policies to ensure tenant isolation, data privacy, and a secure multi-tenant architecture
- Integrated Clerk OAuth (Google, GitHub) and implemented Stripe-powered subscription billing via Clerk to streamline onboarding and monetization
- Developed real-time collaboration features using Supabase Realtime subscriptions for live updates across multiple users and devices

- Deployed to Vercel with optimized build configuration, leveraging a hybrid rendering strategy (SSG + CSR) to deliver strong SEO and low-latency page loads

Browser Automation Suite | Developer

- Built a Python-based orchestration system to manage 350+ concurrent Chrome browser instances with synchronized timing, automated profile configuration, and batch workflow coordination
- Configured browser automation extensions across all instances with XML/HTML attribute targeting for programmatic web interactions
- Implemented resource management and error handling to maintain system stability during large-scale concurrent operations

Professional Experience

Career Break & Independent Study

New Zealand & Overseas | Aug 2024 – Dec 2025

- Post-graduation period for family commitments and travel, while building production projects (Job Tracker, TaskFlow) to advance full-stack expertise

Software Engineering Intern | Waka Transportation Community

Tech Stack: *MongoDB, Express.js, React, Node.js, Netlify, Railway, Nodemailer*

Tauranga, New Zealand | March 2024 – July 2024

- Developed and prototyped core features for the community transport platform, including user authentication and a real-time driver scheduling calendar, contributing to development of local transport services in the Eastern Bay of Plenty
- Built full-stack features across the MERN stack, taking work from requirements gathering through to testing and demonstration
- Built responsive, reusable React components from UI/UX designs, ensuring cross-browser compatibility
- Implemented REST API endpoints and integrated frontend/backend with request validation and error handling
- Debugged application issues and improved component performance using React profiling tools to reduce unnecessary re-renders
- Worked with non-technical stakeholders in weekly check-ins to confirm scope, clarify requirements, and translate feedback into deliverable tasks

Education

Bachelor of Applied Information Technology (Software Engineering)

Waikato Institute of Technology (Wintec) | Hamilton, New Zealand

Graduated: Class of 2024

Relevant Coursework: *Software Development, Web Development, Database Design & SQL, Systems Analysis, OOP, Software Testing, Mobile Apps, Cyber Security, Big Data & Analytics, Game Development, Project Management / SE Project*

Capstone Project: Led a 4-person development team as project manager to deliver a Kotlin-based Android medication tracking application for Anglesea Clinic. Managed requirements, design decisions, and code reviews for drug management features, presenting final product to clinical staff for validation.

Additional Information

Work Eligibility:

NZ Permanent Resident (Full Work Rights); based in Hamilton and open to in-office, hybrid, or remote roles nationwide