

Sam Bai

Full-Stack Software Engineer

Hamilton, NZ | Permanent Resident

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Professional Summary

Full-stack developer who ships production web applications with React, Next.js 16, and Typescript. Software Engineering graduate (2024) with internship experience and multiple deployed projects demonstrating end-to-end ownership from schema design to 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 (exploring)

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

Key Projects

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 Trello-style task management platform, evolving an initial MVP into a feature-rich product with custom board management, delete flows, date tracking, last-edited indicators, animations, and significant UI/UX refactors
- Implemented drag-and-drop task management with optimistic UI for seamless UX, 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

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 Kanban-style job tracker with customizable workflow columns and priority management, demonstrating MongoDB/NoSQL experience alongside existing PostgreSQL skills
- 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

Browser Automation Suite | Developer

- Developed Python Selenium scripts to automate repetitive web interactions, significantly reducing manual data entry time
- Created batch scripts to streamline local development workflows, environment setups, and deployment processes
- Implemented error handling and logging mechanisms for reliability

Professional Experience

Career Break & Independent Study

New Zealand & Overseas | Aug 2024 – Dec 2025

- Post-graduation break for family travel and personal reset, while building production projects (Job Tracker, TaskFlow) to deepen full-stack skills

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 core features for the community transport platform, including user authentication and a real-time driver scheduling calendar, improving access to local transport services in the Eastern Bay of Plenty
- Shipped full-stack features across the MERN stack, taking work from requirements gathering through to testing, deployment, and release
- 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 production 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 team as project manager to build a Kotlin-based Android medication tracking application for Anglesea Clinic. Delivered features for controlled and uncontrolled drug management, presented to and reviewed by clinical staff for accuracy and usability.

Skills Development & Additional Information

Continuous Learning:

Exploring advanced React patterns, modern TypeScript best practices, and full-stack architecture with Next.js and Supabase

Community Engagement:

Studying open-source projects and modern development practices to stay current with industry trends

Work Eligibility:

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