

# Sam Bai

Full-Stack Software Engineer  
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## Professional Summary

Software Engineering graduate (2024) with hands-on full-stack experience in React, Next.js 16, TypeScript, Supabase, and real-time collaborative web applications, seeking a junior full-stack or frontend role

## Technical Skills

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

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

**Backend:** Supabase (PostgreSQL + Row Level Security), Node.js, Express.js, Clerk (Authentication & Billing with Stripe)

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

**Developer Productivity:** Claude, Perplexity, Google Antigravity; exploring automated testing (Playwright, Vitest) with AI-assisted workflows in Antigravity

**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

## 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

## Portfolio Website | Developer

- Developed a high-performance portfolio using Next.js (App Router) and Tailwind CSS, featuring Framer Motion animations and a modern dark theme
- Achieved perfect 100% Lighthouse scores in Performance and SEO by leveraging Vercel's Static Site Generation (SSG)

## **Professional Experience**

### **Career Break & Independent Study**

*New Zealand & Overseas / Aug 2024 – Sept 2025*

- Took a planned post-graduation break to travel and reconnect with family, while also spending time in New Zealand exploring web technologies and planning personal projects

### **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 development of a Kotlin-based Android drug control application for Anglesea as project manager, coordinating a team to design and implement core features for tracking controlled and uncontrolled medications

## **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