

Sarah Wang

sarahwangdk@gmail.com

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CAREER PROFILE

Full-stack engineer with 3+ years shipping secure, production-grade systems end to end. Specialises in Go backends, React/Next.js frontends, and DevOps pipelines. Led production systems serving 500+ users across authentication, DNS management, and client data access, cutting support tickets 85% and lifting reliability to 99.9%. Now extending that engineering judgment into AI product development with Claude and agentic workflows.

KEY SKILLS

- **Frontend:** React, Next.js, TypeScript, TailwindCSS, Styled-Components
- **Backend:** Golang, REST API, Node.js, ExpressJS, C#/.NET
- **DevOps & Cloud:** Docker, Nginx, AWS, Azure (AD/OIDC, MSAL), CI/CD, Vercel
- **Datasource:** MySQL, SQL Server, Redis
- **Security & Auth:** OAuth2/OIDC, CSRF, JWT, Keycloak
- **AI & APIs:** Claude, OpenAI, LangGraph, MCP, RAG (pgvector/LanceDB), Inngest, HuggingFace Transformers, Python, FastAPI, Notion API, Mapbox

EMPLOYMENT HISTORY

Opusv Technology — Software Engineer | 06/2022 – 12/2025

1. ClientPortal System (*Go · Next.js · TypeScript · Docker · CI/CD · Nginx*)

Owned design and delivery of a secure client portal, replacing manual SAP data exports for 40+ clients.

- Designed dual-layer Go backend with JWT service auth and CORS isolation to secure external requests.
- Built Next.js/TypeScript frontend with SQL Server integration for SAP workflows.
- Set up full CI/CD pipeline (GitLab, SonarQube, Docker, Jest).

2. DNS Management System (*Go · AWS Route53 · Azure AD · Next.js · TypeScript*)

Replaced a legacy shared-password cPanel workflow with a secure platform across 100+ client domains.

- Eliminated shared credentials by designing Azure AD OIDC login for all helpdesk staff.
- Built full audit trail and role-based access control, achieving **99.9% DNS update reliability**.
- Built Go backend with AWS Route53 integration and Next.js/React admin UI, cutting DNS support tickets **85%** and lifting efficiency **70%**.

3. RADIUS Accounting Dashboard (*Go · TailwindCSS · HTMX · Keycloak · Prometheus/Grafana*)

Built a secure VPN session monitoring dashboard for 500+ users, giving real-time visibility into active sessions.

- Built Prometheus/Grafana observability with email and Slack alerts, catching issues before production.
- Designed Keycloak-based login audit system, giving leadership first-time visibility into login attempts.
- Packaged app as reusable Docker image, adopted as deployment template by other internal projects.

4. UI Component Library

- Co-built internal UI Component Library (tables, buttons, shared design system), adopted across 3+ projects company-wide.

AOJI, XinQuan Education Group — Education Consultant | 01/2016 – 05/2019

Baili Pharmaceutical Group — Marketing Consultant | 09/2013 – 06/2015

AI RELATED PROJECTS

Software Engineer — AI Product Development | 1/2026 - Current | *Self-employed*

Independently designed, built, and shipped 8+ production AI applications in under 7 months, spanning computer vision, RAG, agentic tool-use, multi-agent systems, real-time streaming, and geospatial data.

1. Linknest (*Next.js · TypeScript · Claude · OpenAI · RAG (pgvector) · Inngest · Python · FastAPI · HuggingFace Transformers*)

AI-powered bookmark manager with semantic search — built to solve my own problem of losing track of saved bookmarks.

- Built a **RAG search pipeline** (pgvector + OpenAI embeddings) and a **cost-aware model router** that cuts AI spend by routing simple tasks to cheaper models.
- Restored classification to **99% of bookmarks** by diagnosing a silent production bug (LLM output parsing failure) that had gone undetected in the live pipeline.
- Benchmarked a self-hosted **fine-tuned DistilBERT** classifier (HuggingFace, served via FastAPI) against Claude Haiku — **37x faster** per call, with a documented accuracy tradeoff.

2. Knowledge Base Agent *(Claude Code · LanceDB · Python · Obsidian · RAG)*

Dual-agent personal knowledge management system — Scribe (capture) + Gardener (read-only maintenance), built to stop AI hallucination from contaminating my own study notes.

- Prevented LLM hallucination from corrupting captured notes by designing a controlled ingestion pipeline — every summary traces back to source content, every new note requires explicit approval; verified on **60 real documents**.
- Designed **atomic operations** (file edit + audit log + git commit as one unit) and **RAG + grep dual-track search** with graceful degradation.
- Actively managing AWS certification study notes: **22 atomic commits, 47 logged operations** (Fission/Assimilation/Creation), **28 active notes**.

3. EasyGo & KICK Hackathon — Gesture-controlled live-streaming engagement platform

- Shipped features across all 3 stages of the streamer lifecycle (pre-show, live, post-show) in **12 hours**, with a team of 4.
- Built 3 gesture interactions (subscribe, react, pause) and a live collaborative mini-game.
- Automated pre-show topic research across X, YouTube, and Reddit, replacing manual trend-scouting.
- LinkedIn recap post generated **1,100+ impressions**.

4. Lovely Shelf *(Next.js · TypeScript · Claude · LangGraph · MCP · Notion API · Sharp)*

AI-powered book library — upload a cover photo, Claude Vision extracts metadata to Notion automatically.

- Built multi-step Claude Tool Use agent pipeline with strict execution order, cutting **token usage 50%**.
- Refactored the hand-rolled agent loop to **LangGraph's createReactAgent**, keeping the external API unchanged for callers.
- Shipped open-source CLI version (books-skill), cataloguing **750+ books at 99%+ recognition accuracy**.
- Built standalone **MCP server** exposing book data via two custom tools, verified end-to-end with live Notion data.

5. AU Council Explorer *(Next.js · Claude · Mapbox)*

Interactive map consolidating council/community resources — childcare, schools, universities, hospitals, libraries, events, parks — into one platform, helping new migrants find nearby services.

- Built **cost-controlled AI search pipeline** (rate limiting, caching, model fallback), keeping unlimited search volume financially sustainable.

Additional shipped projects: HandLog (AI voice/text journal → Notion), Knowho (AI CRM), PinFarer (AI travel planning), Face-to-Sticker Generator (Notion → Replicate automation) — [GitHub Overview](#)

Sharing progress publicly on X and Medium.

VOLUNTEER EXPERIENCE

WaterAid Australia — Database Volunteer | 03/2021 – 08/2021

Make AI Practical — AI Community Volunteer / Speaker | 12/2025 - 7/2026

- Progressed from attendee to volunteer to speaker over 12+ months at Make AI Practical.
- Spoke to 40+ attendees at the July 2026 AI Showcase about a project I built.

RMIT STEM Mentoring Program — Industry Mentor | 08/2026 – 11/2026

- Providing one-on-one career guidance to a Cloud Computing student over four structured sessions, including a workplace visit.

EDUCATION

Deakin University | 02/2020 – 03/2022

- Master of Business Analytics (Information System)