

Aayush Bajaj

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Summary

- Software Engineer with experience building production web applications and developer tools. Proficient in Python, Go, TypeScript, React, and cloud deployment with Docker and Azure.

Experience

Software Engineer - Medical Web Application

Alpha-Cure Medical Centre

Sydney, NSW

June 2024 - Nov 2024

- Led 5-person team to deliver production medical records system replacing legacy desktop software; achieved High Distinction.
- Built Flask backend with Azure SQL database and React frontend; achieved 90+ percent test coverage with Pytest and Cypress.
- Containerised application with Docker and implemented Git-based CI/CD pipeline for automated deployment.

Software Engineer - AI Chat Application

Independent Development

Production

Jan 2025 - June 2025

- Built full-stack chat application using TypeScript, Bun, Svelte, and PostgreSQL with Prisma ORM.
- Implemented security middleware with rate limiting, response caching, and OpenAI GPT API with streaming responses.

Technical Consultant - Web Infrastructure

Freelance

Sydney, NSW

2024 - 2025

- Delivered production web infrastructure including static-site generation, Dockerised mail server, DNS, and HTTPS with Git-based CI/CD.

Projects

Build Your Own Git

Codecrafters

- Implemented core Git commands in Go including object storage, tree parsing, commit traversal, and pack file delta compression.

Bytelocker - Cross-Editor Encryption

Open Source

- Built encryption library in C with native Neovim (Lua) and Emacs (Elisp) plugins; published with comprehensive test suites.

Technical Knowledge Platform

- Architected Hugo static site with 1073 pages, custom Nginx build, automated SSL renewal, and systemd orchestration.

Skills

Languages: Python, Go, TypeScript, JavaScript, Java, C, SQL

Backend: Flask, REST APIs, PostgreSQL, Azure SQL, OAuth2, JWT, Nginx

Frontend: React, Svelte, HTML, CSS, Node.js, Bun

DevOps: Docker, Azure, AWS, Git, CI/CD, Linux, Systemd

Testing: Pytest, Cypress, JUnit, TDD, Code Coverage

Education

University of New South Wales

Sydney, Australia

Bachelor of Computer Science (AI), Minor Mathematics

Feb 2021 - Sept 2025

Certificates

AWS Solutions Architect (SAA-C03)

Jan 2026 - Feb 2026

Amazon Web Services