Aayush Bajaj

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Summary

- Software Engineer who ships to production — 14 deployed web services, 90%+ test coverage, and real client delivery. Proficient in Python, Go, TypeScript, and cloud infrastructure with Docker and AWS. 50+ public repositories on GitHub.

Experience

Software Engineer — Medical Records System
Alpha-Cure Medical Centre

Sydney, NSW
June 2024 - Nov 2024

- Led 5-person team to deliver production-ready medical records system for active medical practice, enabling remote access for clinical staff.
- Built Flask REST API with Azure SQL database and React frontend; achieved 90%+ test coverage with Pytest and Cypress.
- Containerised full application stack with Docker and deployed via Git-based CI/CD pipeline.

Full-Stack Developer — AI Chat Application
Full-Stack Chatbot

Production
Jan 2025 - June 2025

- Built full-stack chat application with TypeScript 5, Hono backend, Zod validation, and PostgreSQL on Bun runtime with OpenAI GPT streaming.
- Engineered typed middleware pipeline with OAuth2/JWT authentication, rate limiting, and response caching; deployed via Docker to Vultr VPS.

Technical Consultant — Web Infrastructure
frizzande.io

Sydney, NSW
2024 - 2025

- Delivered production website with Dockerised mail server, DNS configuration, automated SSL, and Git-based CI/CD for external client (frizzande.io).

Full-Stack Developer — Multiplayer Browser Games
Arcade Platform (arcade.abaj.ai)

Production
Mar 2025 - present

- Shipped 22 browser games (Chess, Battleships, Tetris, Go) with React, Tailwind, and Framer Motion; Socket.IO enables real-time multiplayer across networked devices for 4+ active users.
- Built Node.js/Express backend with PM2 process management; achieved 94% test coverage across 265 test cases. Flutter mobile client in development.

Projects

Build Your Own Git
ugit

- Implemented core Git internals in Python: object storage, tree parsing, commit traversal, and pack-file delta compression.

Anki TikZ Plugin
AnkiWeb Marketplace

- Published Anki flashcard plugin to AnkiWeb marketplace with 25+ downloads; generates LaTeX TikZ diagrams for mathematical study.

Bytelocker — Cross-Editor Encryption

- Built encryption library in C with native Neovim (Lua) and Emacs (Elisp) plugins; 4 GitHub stars and comprehensive test suites.

Skills

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

Backend: Flask, REST APIs, PostgreSQL, Azure SQL, OAuth2, JWT, Nginx, Express, Socket.IO

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
Bachelor of Computer Science (AI), Minor Mathematics

Sydney, Australia
Feb 2021 - Sept 2025

Certificates

AWS Solutions Architect (SAA-C03)
Amazon Web Services

Mar 2026 - Mar 2026