

# Aayush Bajaj

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## Summary

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- UNSW BSc(AI) graduate; Master of Statistics in progress. Shipped a Homebrew-distributed Go macOS app (Typtel), a multiplayer browser-game suite at [arcade.abaj.ai](https://arcade.abaj.ai), and a production website for an external client. Polyglot across Python, Go, TypeScript, and Rust; comfortable with Docker, AWS, and CI/CD pipelines. AWS Solutions Architect certified.

## Experience

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### Team Lead — Medical Records System

*Sydney, NSW*

*UNSW COMP3900 Capstone × Alpha-Cure Medical Centre*

*June 2024 - Nov 2024*

- Led 5-person team through UNSW's Computer Science capstone delivering a medical records system to Alpha-Cure Medical Centre as the live client, 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 the application stack with Docker and shipped via Git-based CI/CD; final deliverable accepted and demoed to the practice's clinical team.

### Solo Developer & Maintainer

*Homebrew Tap*

*Typtel — macOS Developer Telemetry*

*Dec 2025 - Feb 2026*

- Built and shipped Typtel, a Go menu bar app + interactive TUI tracking system-wide keystrokes (modifiers, shortcuts, escape sequences), mouse distance, and typing speed; distributed via a personal Homebrew tap.
- Integrated macOS Accessibility APIs via CGEventTap for low-overhead global event capture; designed CLI subcommands for daily/historical stats and a configurable typing test (live WPM, layout emulation, AU/UK/US wordlists).

### Technical Consultant — Web Infrastructure

*Sydney, NSW*

*frizzande.io*

*2024 - 2025*

- Delivered production website for external client at [frizzande.io](https://frizzande.io) — Dockerised mail server, DNS, automated SSL, and Git-based CI/CD.

### Full-Stack Developer — Multiplayer Browser Games

*Production*

*Arcade Platform — [arcade.abaj.ai](https://arcade.abaj.ai)*

*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.
- Built Node.js/Express backend with PM2 process management at 94% test coverage; Flutter mobile client in development.

## Projects

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### [abaj.ai](https://abaj.ai) — Personal Infrastructure Network

*1,476 pages*

- Operate a Hugo monorepo at abaj.ai with ~1,500 indexed pages and 14 subdomain applications (pegs, mines, arcade, tools, bots, timeline, ledger, math-map, globe, etc.); each hosts an independent app or demo with its own routing and data layer.

### Build Your Own Git

*ugit*

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

### Bytelocker — Cross-Editor Encryption

- Encryption library in C with native Neovim (Lua) and Emacs (Elisp) plugins; three cipher implementations with comprehensive test suites.

## Skills

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**Languages:** Python, Go, TypeScript, JavaScript, Rust, 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

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### University of New South Wales

*Sydney, Australia*

*Master of Statistics*

*Feb 2026 - present*

- In progress · expected completion Dec 2027.

### University of New South Wales

*Sydney, Australia*

*Bachelor of Computer Science (AI), Minor Mathematics*

*Feb 2021 - Sept 2025*

## Certificates

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### AWS Solutions Architect (SAA-C03)

*Mar 2026*

*Amazon Web Services*