

Tuan Minh Nguyen

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Education

University of New South Wales

Bachelor of Science (Computer Science)

- Cumulative WAM: 83

Sydney, NSW

Feb 2025 — Ongoing

Projects

Uniwatch

uniwatch.minhn.me | github.com/Minh7080/uniwatch

Full-stack application that monitors and classifies posts from Australian University subreddits

- Built async scraper in Python for 47 university subreddits via the Reddit API wrapper (*asyncpraw*).
- Classified posts across sentiment, emotion, irony, and 19 topic categories via LLM-based labelling through *OpenRouter* over a RESTful API.
- Designed a normalised PostgreSQL schema with a denormalised response view, composite indexes (hot/top/controversial/new), and cursor-based pagination for efficient dashboard queries.
- Built a responsive dashboard in TypeScript with Next.js 16 (React 19, Tailwind, daisyUI, Kysely), using React Server Components and SSR for SEO and faster first paint.
- Containerised the stack with Docker and Docker Compose on a Vultr VPS, fronted by a Caddy reverse proxy with automatic HTTPS.
- Set up CI/CD with GitHub Actions to redeploy on every push to main.

Slackr

slackr.minhn.me | github.com/Minh7080/slackr

Full-stack real-time chat application

- Built a full-stack Slack-style chat app (channels, threads, emoji reactions, pinning, image uploads) across 5 Dockerised services: PostgreSQL, MinIO, Spring Boot API, static frontend, and Caddy with automatic HTTPS.
- Designed stateless JWT auth with Spring Security and BCrypt, extending the same token to STOMP WebSocket handshakes via a custom ChannelInterceptor for both HTTP and WebSocket authorisation.
- Implemented STOMP messaging over WebSocket for real-time message, edit, delete, pin, and reaction broadcasts.
- Designed an object-oriented domain model (users, channels, memberships, messages, reactions) using Java and Spring Data JPA, with repository-level membership checks for private channels.
- Stored uploaded images in a MinIO bucket and served them via presigned URLs for preview.
- Wrote a dependency-free Vanilla JS frontend (no framework); served statically using Express.js to inject environment variables at runtime.
- Created JUnit/MockMvc unit tests for channel and message endpoints.

Skills

- **Programming Languages:** TypeScript, JavaScript, Python, Java, C, SQL, HTML, CSS, Bash, Lua.
- **Technologies:** React, Next.js, Vite, Astro, Tailwind CSS, Spring (Boot, Data JPA, Security), Express.js, RESTful API, STOMP/WebSocket, JWT, MongoDB, Redis, MinIO, Docker, Caddy, GNU/Linux, Jest, JUnit/MockMvc, Git, GitHub/GitHub Actions, VS Code, IntelliJ IDEA, Vim/Neovim.

Work Experience

Service Team Member

Dec 2020 — Ongoing

Coles

Sydney, NSW

- Covered late-night closing and early-morning opening shifts: store cleaning, store closing, and trolley collection to keep the shopfront presentable for customers.
- Held the role consistently across high school and now alongside a full-time CS degree.

Extracurricular Activities

UNSW Food Hub Volunteer

Feb 2025 — Nov 2025

- Sorted, stocked, and inventoried donated food and household goods to keep the pantry running during opening hours.
- Assisted students with sign-ups and queue flow during peak distribution sessions.