Lachlan Wright

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About Me

I am a Software Engineer holding a Bachelor of Engineering (Honors) at UTS. My studies and experience have had a primary focus on full-stack development, in addition to data science and low-level languages.

Education & Qualifications

Bachelor of Engineering (Honours) (Software) - UTS   **Feb 2020 - Nov 2024**
- Completed degree with 198 credit points, with a WAM of 85.97%, and a GPA of 6.47/7.00.

Experience

Software Engineer - Chaos1 (Sydney, NSW)   **Nov 2023 - Feb 2026**
- Developed a NextJS website in a team of 6 interns, before being hired for continued development.
- Utilised TailwindCSS and ShadCN components for efficient development and consistent interfaces.
- Contributed to a text editor utilising TipTap's editor, and its live synchronisation with HocusPocus.
- Provided team members with technical mentoring, guidance, and code reviews.
- Implemented an end-to-end testing suite executed using Cypress and GitHub Actions.
- Developed an additional Flutter application with a Spring backend utilising Hibernate.
- Managed Google Cloud Platform services, including Cloud Build, Cloud Run, and Cloud SQL.

Portfolio

Deployments, repositories, and demonstrations are available at lachlanbwwright.github.io

Pangea Resource Edit
- Formulated a drag and drop level editor for games from Pangea Software with React and Konva.
- Forked and extended the Python "RSRCDump" library for editing MacOS Resource Fork files to support padding bytes, improve support for struct arrays and non-CLI access to features.
- Analysed Otto Matic's source code to understand and interpret level data structures.
- Implemented the LZSS compression algorithm for decompressing and repacking level data.
- Developed converter for translating model data from proprietary "BG3D" format to glTF and back.
- Used ThreeJS via React Three Fiber to visualise model data and level topology.

Online Exam System
- Created a mock website for online invigilation of exams with NextJS, tRPC, Prisma, and TailwindCSS.
- Provided advice, feedback, guidance, and performed code reviews in an 8-person team.
- Contributed to an implementation of a system for blurring the background of a webcam feed.

Deal Scanner
- Devised a TypeScript application for monitoring online retailers to find and notify users of deals, deployed using Heroku alongside a database hosted using Turso.
- Queried endpoints, scraped websites with Puppeteer, and sent notifications leveraging DiscordJS.
- Utilised an SQLite database via Prisma to persist queries created by users.

Online 'Mafia' Game
- Constructed an online chat-based game built with React, in addition to a React Native mobile app.
- Handled bidirectional user-server WebSocket communication using SocketIO and PartyKit.

Public Transport Timetable
- Developed a Flutter mobile application for viewing public transportation timetables in NSW.
- Interfaced with Transport for NSW's OpenData API, parsing Protobuf and CSV data.

Technical & Core Capabilities

Programming Languages: TypeScript, JavaScript, Python, MATLAB, Dart, Java, Kotlin, C, Rust.
Frameworks: Spring, ReactJS, NextJS, Svelte, SvelteKit, Flutter.
Libraries: Jotai, Immer, TanStack, ExpressJS, tRPC, SocketIO, PartyKit, TailwindCSS, ShadCN, Pyodide, TipTap.
Testing, Deployment: Vitest, Pytest, GitHub Actions, Docker, Heroku, Google Cloud Platform, Azure.
Database Management: Hibernate, Prisma, SQLAlchemy, Mongoose, SQLite, PostgreSQL, MongoDB.
Data Science: Tensorflow, Numpy, Pandas, MATLAB, KNIME.