

Yuelin Liu

SOFTWARE ENGINEER (FULL-STACK & AI)

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Professional Summary

Product-minded Software Engineer with commercial experience building and scaling resilient web applications. I specialise in the TypeScript/React and Node.js ecosystem, architecting microservices, and integrating AI/LLM solutions (OpenAI, LangChain) to solve complex business problems. Passionate about writing clean, testable code and leveraging DevOps practices to deliver exceptional user experiences.

Career Highlights

- **Led 81% Reduction in API Latency:** Re-architected a critical data-fetching service at ByteCroniX, cutting response times from 29s to 5.6s to support production user load.
- **Increased Operational Efficiency:** Delivered a management dashboard at Espresso Carwash that automated daily admin tasks, saving 20+ minutes of manual work per site per day.
- **Drove Community Engagement:** Built a club platform from scratch, resulting in adoption by 100+ active members and becoming the central hub for the Melbourne University Ultimate community.
- **Shipped Production-Grade AI:** Integrated OpenAI and LangChain into a commercial SaaS product to automate intelligent data extraction, delivering a core business value proposition.

Technical Expertise

Full-Stack Engineering: TypeScript, React 18, Next.js 15, Node.js 20, Express, REST APIs, GraphQL, MongoDB, Tailwind CSS, Redux

AI & LLM Integration: OpenAI API, LangChain, CrewAI, Vector Databases, Hugging Face

Cloud, DevOps & Testing: GCP (GKE), AWS, Docker, Kubernetes, GitHub Actions (CI/CD), TDD, Jest, Supertest

Commercial Experience

Full-Stack Developer

Mar 2025 – Present

ByteCroniX — AI SaaS Platform

Melbourne, Australia · Hybrid

- Architected and maintained 4 core Node.js microservices within a GCP/GKE environment, ensuring the scalability and reliability of key features like authentication and data processing.
- Engineered a zero-downtime CI/CD pipeline with GitHub Actions and Kubernetes (blue-green), improving developer velocity and reducing deployment risk for a 12-service fleet.
- Translated business requirements into a production-ready AI feature using OpenAI/LangChain to automate residency category predictions, directly impacting product value.
- Collaborated within an agile team, participating in weekly sprints, code reviews, and demos to deliver a pixel-perfect Next.js frontend that met both user and design specifications.

Full-Stack Developer

Mar 2024 – Oct 2024

Espresso Carwash Pty Ltd

Melbourne, Australia

- Delivered an end-to-end internal tool for managers, taking the project from requirements gathering to a full-stack React/Node.js deployment that boosted operational efficiency.
- Implemented a secure authentication system using JWT and Google OAuth, defining distinct access roles that aligned with the company's operational structure.

Product-Focused Projects

- Community Engagement Platform | *Next.js, TypeScript, MongoDB*

100+ Users, 100+ Stars
- Solved the club’s coordination and communication challenges by developing a central hub for events, announcements, and member directories, leading to 100% adoption by the active member base.
- Collaborative SaaS Prototype | *Next.js, Convex, Clerk*

Solo Project
- Explored a SaaS product concept by building a proof-of-concept multiplayer IDE to solve challenges in real-time state synchronisation, authentication, and tiered user access.

Education

- The University of Melbourne

Master of Information Technology

2022 – 2023
- University of Nottingham

Bachelor of Computer Science

2016 – 2020