

# Yuelin Liu

FULL-STACK SOFTWARE DEVELOPER

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## PROFESSIONAL SUMMARY

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Melbourne-based Full-Stack Software Developer with commercial experience building React, TypeScript and Node.js applications for SaaS platforms, internal tools and AI-assisted workflows. Strong in REST APIs, authentication, testing, Docker and CI/CD, with hands-on experience shipping production-style web applications. Full Australian work rights until Mar 2029.

## SKILLS

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**Languages:** TypeScript, JavaScript, Python, Java

**Frontend:** Next.js 14/15, React, Tailwind CSS, HTML5, CSS3, Responsive UI, Component Design

**Backend:** Node.js, Express, REST APIs, JWT, OAuth, Session Cookies

**Databases:** PostgreSQL, MongoDB, MySQL, Firebase, Convex, Vector Databases

**Cloud & DevOps:** AWS Lambda, S3, ECR, GCP GKE, Docker, Kubernetes, Terraform, Nginx, GitHub Actions, Vercel, Render

**Testing & Quality:** Jest, Supertest, Playwright, React Testing Library, API Testing, Regression Testing

**AI & LLM:** OpenAI SDK, Gemini, DeepSeek LLM, Amazon Bedrock, LangChain, Structured LLM Outputs, Agentic Workflows

**Tools & Platforms:** Clerk, Git, GitHub, Postman, Jira, Confluence, Slack, VS Code

## COMMERCIAL EXPERIENCE

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### Freelance Full-Stack Developer & Consultant

Sep 2025 – Present

*Independent Practice*

*Melbourne, Australia · Hybrid*

- Architected and delivered responsive, production-ready SaaS features using Next.js 15 App Router structures, optimizing frontend performance and SEO configurations.
- Conducted technical discovery, application wireframing, and API integration mapping to digitize legacy workflows for Melbourne-based commercial clients and local sports clubs.
- Implemented secure user authentication and serverless data storage management layers using modern production tools including Clerk (OAuth) and Convex.

### Full-Stack Developer

Mar 2025 – Aug 2025

*ByteCroniX – AI SaaS Platform*

*Melbourne, Australia · Hybrid*

- Reduced API response time by 81% from 29s to 5.6s by optimising data-fetching logic, improving reliability under peak production loads.
- Built Node.js/Express microservice features for AI-assisted user pathways using OpenAI function calling, directly increasing user form completion rates.
- Maintained 4 core Node.js microservices within a GCP/GKE environment, supporting secure authentication and internal data processing flows.
- Optimised CI/CD pipelines (GitHub Actions, Docker, Kubernetes), establishing a robust deployment framework that achieved near-zero-downtime releases.
- Improved release confidence by adding Jest and Playwright coverage, achieving 90% PR test coverage for API and UI changes.

### Full-Stack Developer

Mar 2024 – Oct 2024

*Espresso Carwash Pty Ltd*

*Melbourne, Australia*

- Built a full-stack React and Node.js management portal that digitised legacy spreadsheet workflows, saving approximately 6 hours per week per site.

- Designed and scaled REST API endpoints and MongoDB/PostgreSQL schemas to handle operational records, users, and reporting workflows.
- Implemented secure role-based access control using JWT and Google OAuth, aligning data access with internal admin and staff hierarchy.
- Containerised services with Docker and built GitHub Actions pipelines to automate deployments, eliminating manual server updates.
- Collaborated directly with non-technical stakeholders to translate operational requirements into intuitive dashboard features.

## SELECTED PROJECTS

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### **MoneyGuard AI Finance Pipeline** | *TypeScript, Node.js, Gemini LLM, DeepSeek LLM*

- Architected an asynchronous, multi-LLM wage-audit pipeline that extracts timecard data via Gemini Vision and streams real-time financial reports to a Telegram bot UI.
- Designed a deterministic finance engine using TypeScript and Zod to strictly validate AI-generated OCR outputs and compute local metrics, including burn rate, surplus and hours-to-spend.
- Enforced a strict privacy boundary via in-memory data masking, calculating financial metrics locally to ensure zero raw income data or personal assets are exposed to external cloud APIs.
- Engineered a fault-tolerant integration layer with automated retry/backoff handling and dynamic timestamp-throttling, eliminating HTTP 429 rate-limit errors during high-frequency streaming updates.

### **Production AI Agent System** | *Terraform, AWS Lambda, Bedrock, GitHub Actions*

- Built and deployed a robust multi-agent AI architecture on AWS Lambda, using Infrastructure as Code with Terraform to ensure scalable and repeatable cloud provisioning.
- Integrated observability tooling to monitor agent behaviour, state transitions and LLM tracing across the full execution lifecycle.

### **Melbourne University Ultimate Club Platform** | *Next.js 15, TypeScript, Tailwind CSS, Open-Source*

- Architected a modular, open-source web application template built to optimize sports club management, player statistics tracking, and local community engagement.
- Implemented Next.js 15 server-side logic and optimized layouts to deliver a fast, performance-first user dashboard with seamless multi-device compatibility.

## EDUCATION

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### **The University of Melbourne**

*Master of Information Technology*

*2022 – 2023*

### **University of Nottingham Ningbo China**

*Bachelor of Computer Science*

*2016 – 2020*