# Cheng Yu

Senior Software Engineer / Tech Lead - AI Systems

Melbourne, Australia
chengyu0316@gmail.com +61451041116
LinkedIn / cheng-yu-55874484 GitHub / s3341458 resume.theyucheng.com

Senior Software Engineer and Tech Lead with 10+ years building business platforms and APIs. Hands-on TypeScript/Node.js development and Python/Flask engineering, with recent LangChain and MCP agents for configurable customer service and business workflows. Built code-repair pipelines with human approval and automated tests; led delivery improvements that reduced AWS costs by 80% and CI/CD time by 90%.

## CORE EXPERTISE

**AI engineering:** Model Context Protocol (MCP), Configurable agent skills, LangChain / mcp-use, AI agents / tool integration, Domain-rule harnesses, AI testing workflows

**TypeScript / Node.js:** SDKs, WebSockets, React component compilation, automated tests

**Backend:** Python, Flask, SQLAlchemy, SQL / PostgreSQL, Django, REST APIs, SDK development

**Infrastructure:** AWS, GCP, Docker, CI/CD, cost and performance optimization

## EXPERIENCE

### Cestiny AI

AUG 2026 - PRESENT

**AI Product Founder & Lead Engineer (Part-time)**

- Leading development of a BaZi AI analysis and chat product part-time alongside my main engineering role.
- Developing a deterministic rules harness and structured evidence queries to ground LLM interpretation in BaZi domain knowledge.
- Built unit tests for domain-rule behavior, edge cases and changes to the analysis engine.

### Unitix

AUG 2019 - PRESENT

**Tech Lead**

- Developing an AI Tester to feed automated test results into a continuous code-repair workflow.
- Built a code-repair harness routing errors and GitHub Issues to Cursor cloud agents for tested PRs; implemented approval checks and unit tests for issue closure and PR merges.
- Automated supplier coordination, shipment and scheduling tasks with manager approval and notifications; manager feedback indicated approximately 30% productivity improvement.
- Built configurable Merchi commerce bots with LangChain and MCP; at Custom Wristband, AI handles over 50% of chats and customers can place orders through the bot.
- Reused API authorization for MCP tools, capping customer-facing access at client-level permissions while retaining more restrictive user permissions.
- Developed TypeScript SDKs and Node.js tooling for WebSocket integration and tested release automation.
- Built Python orchestration and a Node.js compilation pipeline for database-stored React components, plus frontend syntax validation and compilation-error feedback.
- Reduced AWS costs by 80% and CI/CD time by 90%. Introduced two-week Scrum iterations in 2019, incorporating user feedback into planning.

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## EXPERIENCE / CONTINUED

### Common Code

OCT 2017 - JUL 2019

**Software Developer**

- Agrinous: built Django REST APIs for an offline-capable React Native livestock application; improved optimized endpoint performance by approximately 100-1,000x.
- Dimeo: supported a Django-based waste-management system with 40+ Raspberry Pi devices and 2,000+ users; resolved measurement and hardware-integration issues.
- MEERQAT: maintained Meteor.js, React.js and Django DDP integrations and addressed legacy dependency compatibility.

### Unitix

AUG 2014 - OCT 2017

**Full Stack Developer**

- Developed Merchi's Flask/PostgreSQL API framework for on-demand resource access, reusable CRUD operations and permissions.
- Led JavaScript and Python SDK development and built core commerce functionality through the 2016 launch.
- Built warehouse and logistics features and advanced system containerization.

## EDUCATION

### RMIT

2012 - 2014

Master's degree, Computer Science / GPA 3.8

**Research:** search index optimization, AI-assisted labeling and sentiment analysis.

**Awards:** A$10,000 RMIT-Lexer collaboration scholarship; two A$4,000 summer internship scholarships; A$4,000 research exhibition funding.

### Hubei University of Technology

2007 - 2011

Bachelor's degree, Computer Science / GPA 3.2

## OPEN SOURCE

mydocker (2018, 2,000+ GitHub stars): Contributed three merged fixes and improvements to an educational Go container engine, covering namespace-related imports, networking API compatibility and workspace cleanup.

https://github.com/xianlubird/mydocker