Charles Zhao

Melbourne, VIC, Australia | 0493-494-257 | weibo.zhao@icloud.com

Education

University of Melbourne   **Melbourne, VIC**
B.Sc in Applied Mathematics   Jul 2019 – Jun 2023

- Specialised in Mathematics with strong foundations in analytical thinking, mathematical computation, and data analysis.
- Completed 7 core Computer Science modules covering data structures, algorithms, object-oriented programming, systems, networks, and database fundamentals.

Experience

BetMakers (ASX:BET)   **Melbourne, VIC**
Junior Developer   Mar 2024 – Present

- Designed, built, and maintained a distributed, scalable full-stack monitoring platform using Go, React, and Postgres, delivering a streamlined business metrics collection, aggregation, and reporting system for internal and external users. Successfully deployed globally across BetMakers terminals, processing over 500,000 messages daily with 95% uptime, replacing ad-hoc workflows with automated operations.
- Designed and architected a microservice for the monitoring platform using Python and FastAPI, enabling customisable PDF report generation, multi-timezone scheduling, opt-in/opt-out options, branded email templates alongside with real-time analytics via Grafana dashboard. Delivered full visibility into collected metrics with real-time dashboards and flexible historical reporting through archived event data in GCS.
- Participated in Next-Gen platform development under a tight timeline, delivering a modern, design-aligned UI using Next.js, React Native, and Turbopack. Implemented comprehensive KYC authentication flows, Responsible Gambling experience, and User SignUp and Login.
- Automated ITAM and ITSM processes, and supported migration from ServiceNow to Jira Service Management. Automated onboarding and offboarding process, software provisioning.

BeeQuant AI   **Melbourne, VIC**
Software Engineer (Contractor)   Jan 2024 – Jul 2024

- Migrated existing legacy frontend codebase from React/Vite to a modern React stack using Next.js 14, Turbopack, and TailwindCSS, introducing ESLint, Prettier, and pre-commit hooks to standardise code quality and improve CI reliability.
- Developed backend and frontend authentication features with Next.js and PostgreSQL with JWT and customised token rotation strategy, enhancing security and user experience across the trading platform.
- Built and maintained shared packages within the Turborepo monorepo, achieving high unit test coverage and centralizing logic across the trading platform for improved maintainability.
- Researched AI-based trading agents, exploring ChatGPT integration for automating market analysis and building intelligent trading bots.

Greythorn Assets Management   **Melbourne, VIC**
Software Engineer (Intern)   Nov 2023 – Mar 2024

- Developed a Telegram community management bot with AI-enhanced features, including photo generation, smart Q&A, real-time portal-based configuration sync, and custom AuthJS authentication with referral code verification and crypto wallet linking.
- Built a full-featured IDO platform with React and Storyblok CMS, delivering modular, design-aligned components using TypeScript under a tight delivery timeline.
- Developed a Web3 gaming dojo on the Blast Layer 2 network, integrating on-chain transactions, in-game shops, and ranking systems, significantly reducing gas fees; project submitted to Blast.io Open Hackathon.

OrderHere.com   **Melbourne, VIC**
Software Engineer (Contractor)   June 2023 – Jan 2024

- Designed, developed, and architected a multi-tenant online ordering and delivery platform using Java Spring Boot, Postgres, and Redis. Implemented authentication and authorisation with Spring Security, along with rate limiting, IP gateway filtering, CORS, and common security measures, delivering a highly scalable, high-performance authentication system in Java 17.
- Built the frontend authentication system using Next.js and JavaScript with AuthJS, supporting email login, JWT rotation, and OAuth logins from Google, Facebook, and Apple.
- Applied test-driven development principles to achieve high unit test coverage and documented APIs with Swagger for maintainability and collaboration.
- Strictly followed Agile development practices with iterative delivery cycles, daily stand-ups, and regular progress reporting to the Product Owner. Collaborated closely with the DevOps team including customised CI/CD stages, containerise software with Docker, and testing across different deployment environments on AWS.

Side Projects and Startup Experience

Sensys1 (Monitoring and Asset Management Platform)	**Melbourne, VIC**
Co-Founder, Developer	Mar 2024 – Present

- Founded and architected Sensys1, a next-generation AI-powered monitoring and asset management platform for B2B hardware providers, delivering scalable, real-time system observability solutions.
- Built the frontend application from scratch using Next.js 15 and React 19, implementing server-side rendering (SSR) and server components to maximise performance and scalability.
- Engineered the backend based on Sensu Go (open-source), integrating a customised event pipeline, real-time metrics collection, alerting systems, reporting and email notification modules, a marketplace for event collection handlers, a real-time collaborative scripting console, and an MCP server to enable AI-driven resource management.
- Designed a secure, multi-tenant architecture with Role-Based Access Control (RBAC), ensuring strict data isolation and operational security across client environments.
- Actively iterated on internal user feedback to refine UI/UX, optimise system workflows, and enhance backend performance, progressing towards a production-ready MVP.
- Currently finalising the first MVP build, establishing contact with potential early customers, and preparing a commercial-grade production system for upcoming demos and pilot deployments.

BrewerNet (Social Networking Platform)	**Melbourne, VIC**
Co-Founder, Lead Developer	Jan 2024 – Aug 2024

- Led an 8-person engineering team to develop BrewerNet, a LinkedIn-inspired professional networking platform, incubated through the University of Melbourne's MAP startup program.
- Conducted comprehensive early-stage market research and user analysis to validate platform features, refine product-market fit, and prioritize core functionalities for career networking, career coaching, and helping new graduates expand their professional networks.
- Managed the full product development lifecycle, coordinating backend and frontend teams to deliver a functional prototype within a 6-month timeframe while maintaining team productivity and milestone alignment.
- Achieved a Top 15 placement in the University of Melbourne Faculty of Business Startup Pitch Competition.
- Participated in the University of Melbourne Velocity Program (10-week startup incubator), and after thorough evaluation and market testing, made the decision to sunset the project due to limited revenue generation potential.

Skills

- **Backend**: Go, Python, NodeJS, Deno, Java Springboot
- **Frontend**: React, NextJS, TailwindCSS, CSS, AuthJS, Vite, Webpack, Babel
- **Cloud Native**: Supabase, Vercel, Neon, AWS (Lambda / EC2 / S3 Bucket / Eks / Cognito / Amplify), GCP (GKE, BigQuery, Google Cloud Bucket)
- **Other**: Docker, CI/CD (Github Actions and Gitlab CI/CD), Postgres, MongoDB, K8s, Grafana, Linux System, Sentry, Prometheus, Etcd, Redis

Awards

- 2024 - High performer award at BetMakers within 3 months of joining.
- 2024 - Award as Rising Star Employee of the year.