

# Henry Parker

NGUYEN MANH TUAN HUNG

AI Software Engineer | Backend & Full-Stack Engineer

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## PROFESSIONAL SUMMARY

AI Software Engineer specializing in backend engineering, intelligent agent runtimes, and scalable distributed architectures. Experienced in architecting production-grade REST APIs, asynchronous task orchestration with Redis/RabbitMQ, multi-tenant real-time messaging, and containerized Docker microservices. Proven track record implementing secure multi-provider authentication (OAuth 2.0/JWT), optimizing database latency, and transforming complex technical requirements into reliable, production-ready software.

## TECHNICAL SKILLS

- Programming:** Python, TypeScript, JavaScript
- AI & LLM:** AI Agents, LLM Integration, Workflow Automation, Prompt Engineering, Agent Runtimes
- Backend:** Node.js, REST APIs, Socket.io, Asynchronous Task Orchestration
- Databases & Messaging:** PostgreSQL, MongoDB, Redis, RabbitMQ
- Infrastructure:** Docker, Git, GitHub, CI/CD, Linux, Vercel, Render
- Frontend:** React.js, Vite, HTML, CSS

## PROFESSIONAL EXPERIENCE

- Founder & AI Software Engineer** HP OS — Independent Project 10/2024 – Present
- Architected a local-first AI operating system integrating HP Control Center, backend microservices, an AI Agent Runtime, and workflow automation.
  - Engineered backend architecture and RESTful APIs for asynchronous task orchestration, user authentication, and Redis/RabbitMQ queue processing.
  - Implemented end-to-end task execution pipelines featuring automated planning, tool execution, multi-stage verification, and real-time health telemetry.
  - Configured persistent data layers using PostgreSQL, MongoDB, and Redis caching for low-latency state synchronisation and infrastructure monitoring.
  - Integrated modular local AI generative applications (HP Music Studio, HP Vision Studio, HP Video Studio) communicating over internal APIs.
  - Documented comprehensive platform architecture, testing matrices, and operational recovery runbooks.

## SELECTED PROJECTS

- PastelChat** *React.js, Node.js, MongoDB, Socket.io, Electron, OAuth 2.0, JWT* Live Demo | [GitHub](#)
- Production-ready real-time communication platform supporting multi-tenant messaging across web and desktop clients.*
- Built a full-stack real-time messaging platform supporting 50+ active users and 1,000+ daily messages without critical production incidents.
  - Implemented OAuth 2.0 (Google & Microsoft) and JWT authentication with session handling, reducing unnecessary API roundtrips by 40%.
  - Optimized MongoDB schema indexing and backend initialization, decreasing cold-start latency from approximately 30 seconds to under 2 seconds.
  - Automated CI/CD deployments to Vercel and Render with continuous uptime monitoring via UptimeRobot, maintaining 99.5% availability.
- ReproSpec** *Node.js, JavaScript, TypeScript, Docker, SHA-256, npm* [GitHub](#)
- Portable evidence capture and sandboxed replay CLI toolkit for reproducible bug diagnostics.*
- Engineered a Node.js CLI tool implementing an open specification for generating portable, tamper-evident software issue reports.
  - Implemented configurable regex redaction and cryptographic SHA-256 integrity verification to sanitize and validate bundles prior to execution.
  - Built an isolated Docker replay runner utilizing disposable execution copies and offline network constraints to safely reproduce bugs.

## EDUCATION

- Diploma of Information Technology** UTS College 09/2023 – 12/2024
- Sydney, Australia

## LANGUAGES

**Vietnamese:** Native • **English:** Upper-intermediate (IELTS 6.0)