Hoang Dinh Phu Quy

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Profile

Software Engineering student with hands-on experience building full-stack applications using Next.js, Laravel, and Spring Boot, including an internal system running in production on-premise at a hospital. Passionate about backend systems, API design, and exploring practical AI/RAG applications.

Education

Saigon University Expected June 2028
Software Engineering *GPA: 3.3/4.0*

Technical Skills

Languages: TypeScript, Java, PHP, Python
Frameworks: Spring Boot, Next.js, Node.js, Express.js, Laravel, JUnit
Libraries: React, Shadcn/UI
Databases: PostgreSQL, Redis, Neo4j
Tools: Git, GitHub, Docker, Postman, Redis Insight, Windows Server, Servy

Experience

Software Developer Intern – Khanh Hoi Hospital Sep 2026 – Present
Software Development *Ho Chi Minh City, Vietnam*

- Independently designed, developed, and deployed to production an internal web application using Next.js 16 and PostgreSQL to digitize nursing shift-handover reporting across 12 hospital departments.
- Implemented role-based access control for department users, hospital leadership, the planning department, and administrators, ensuring each group accesses only authorized data.
- Self-hosted the application on-premise as a native Windows service using Servy, with automatic startup, PostgreSQL dependency management, log rotation, and automatic restart.
- Built browser-based automation scripts with CSV import to automatically populate patient information in the hospital's internal web system, reducing repetitive manual data entry.

Projects

Snapgram Server | *Java 21, Spring Boot 4, Microservices, PostgreSQL, Kafka, Redis, Docker* Sep 2026 – October 2026

- Designed and developed a social media backend using a microservices architecture with eight independent services, including API Gateway, authentication, content, chat, media, notification, payment, and recommendation.
- Implemented centralized JWT authentication at the API Gateway and role-based access control (RBAC), propagating authenticated user context to downstream services.
- Integrated Apache Kafka for asynchronous event-driven communication between services and Redis for distributed caching.
- Containerized the development infrastructure using Docker Compose and implemented database schema versioning with Flyway across services.

Zerus Coffee | *TypeScript, Next.js 16, Laravel, Docker, Redis, Filament, GSAP* Feb 2026 – May 2026

- Developed a full-stack e-commerce web application for a coffee store using Next.js and Laravel.
- Implemented OAuth access token authentication and cart merging logic for guest and authenticated users.
- Designed and processed asynchronous tasks using Redis queues to handle background jobs efficiently.
- Built an admin management dashboard with Filament for product, order, and inventory management.

DeskHive - Local Multi-Agent AI Assistant | *Python, Ollama, Gmail API, Google Calendar API* October 2026 – Present

- Designed and developed a local multi-agent AI assistant framework using FastAPI and Ollama, with a central LLM orchestrating specialized agents for office tasks.
- Implemented document summarization, root cause analysis, Gmail integration, and automated calendar event creation from emails, PDF documents, and user prompts.
- Integrated Gmail API and Google Calendar API for email management and event scheduling, including support for standard ICS calendar exports.
- Built a reinforcement learning pipeline using DPO and GRPO with TRL and Unsloth to support model fine-tuning.