Dang Xuan Huy

Full-stack Developer

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ECDUCATION

ELECTRIC POWER UNIVERSITY 09/2023 - Expected 2028

Bachelor of Engineering in Software Engineering — GPA: 3.36 / 4.0

SKILLS

Backend	C# (.NET 8, ASP.NET Core MVC, WPF), Node.js (Express), RESTful API, SignalR
Frontend	React, Next.js, React Native (Expo), TypeScript, Tailwind CSS
Database & Search	MongoDB (Atomic Updates), MySQL, Meilisearch, RAG / Vector Search
Systems & DevOps	C++ (ARM64), TCP Socket IPC, Multithreading, Docker, GitHub Actions (CI/CD)

PROJECTS

HV Travel – Tour Management Portal - Full-stack Developer 01/2026 - 05/2026

Tech: C# .NET 8 (ASP.NET Core MVC), MongoDB, SignalR, Meilisearch, Docker | GitHub: github.com/HuyDangXuan/ASP.NET-HV-Travel

- Architected backend using 4-layer **Clean Architecture** (.NET 8, MongoDB, Repository Pattern) with Dual-Cookie Authentication and real-time support chat via **SignalR**.
- Integrated Groq LLM (Llama-3.3-70B) with dynamic RAG enrichment, offloading AI workloads via non-blocking BackgroundService queues.
- Built a TSP itinerary optimizer (2-Opt Heuristic) and fault-tolerant search engine using Meilisearch with automatic MongoDB Fallback Pattern.
- Containerized multi-service stack via Docker Compose (75% image size reduction with multi-stage builds) and Cloudflare Zero-Trust Tunnel.

HV Travel – Mobile Tour Booking App - Full-stack Developer 01/2026 - 05/2026

Tech: React Native (Expo), TypeScript, Node.js, FastAPI, MongoDB, Meilisearch | GitHub: github.com/HuyDangXuan/React-native-HV-Travel

- Built a distributed booking system across Node.js (REST/Socket.IO), FastAPI (Python), and React Native Expo with Hybrid Recommender & NetworkX route optimization.
- Engineered secure authentication using Refresh Token Rotation (SHA-256), single-flight promise deduplication, and cross-platform QR login.
- Integrated MoMo & ZaloPay with HMAC-SHA256 webhook verification and MongoDB unique sparse indexing for transaction idempotency.

Multi-Instance Process Orchestration System - *Sole Developer* 09/2026 - Present

Tech: C# .NET 8 (WPF), C++ (ARM64), TCP Socket IPC, MongoDB, Next.js | GitHub: **github.com/HuyDangXuan/Multi-Instance-Process-Orchestration**

- Architected a desktop orchestration tool (.NET 8 WPF) managing **8–16 concurrent Android VM instances** with sub-5ms socket response latency.
- Designed a custom TCP Socket IPC protocol (4-byte Length-Prefixed Framing) and an O(1)O(1)O(1) Command Router dispatching 70+ RPC commands without fragmentation.
- Implemented C++ native interception with **RAII Guard Pattern** and **Thread-Local Storage (TLS)** buffers to eliminate race conditions and ensure zero crashes.
- Integrated MongoDB telemetry sync with in-memory fallback and built a centralized monitoring dashboard using Next.js 16 and Tailwind CSS.

CERTIFICATIONS

IELTS 6.0	2023
28Tech Full-stack NodeJS	2025