

Dat Nguyen

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Education

Michigan State University – East Lansing, MI

Aug 2022 – May 2026

B.S. in Computer Science, Honors College | Dean's List | GPA: 3.8

Experience

Software Engineer Intern, DIJAM – Hanoi, Vietnam (Remote)

May 2025 – Aug 2025

- Built subscription interface in **Next.js/TypeScript** with comprehensive validation, enhancing user experience for **1M+ users** and **15K+ DJs**.
- Created affiliate marketing system in **Python/Flask** with unique discount codes and commission tracking, enabling **500+ DJs** to generate recurring revenue.
- Streamlined payment verification by integrating **Gmail API** to automatically parse bank transfer confirmations, eliminating **8+ hours/week** of manual finance work with near-perfect accuracy.

Software Engineering Intern, nuoc.solutions – San Francisco, CA (Remote)

May 2024 – May 2025

- Developed water quality monitoring platform using **Next.js, FastAPI, PostgreSQL** to track data from **200+ stations**, providing **1,000+ farmers** with real-time insights via **Mapbox** and **Chart.js**.
- Integrated **LLM-powered analysis** enabling natural-language queries, processing **500+ monthly requests** and delivering actionable recommendations.
- Containerized and deployed services with **Docker** on **Azure**, scaling the monitoring platform across multiple provinces.

Software Engineering Intern, HCLTech – Hanoi, Vietnam

May 2023 – Aug 2023

- Set up static application security testing (**SAST**) in CI/CD pipelines using **Python, Pylint, GitHub Actions**, automating scans of **10K+ files** and reducing manual review time by **70%**.
- Built anomaly detection pipeline using **Isolation Forest** and **One-Class SVM**, flagging **150+ high-risk security events** with **95% precision**.
- Implemented real-time file integrity monitoring with automated alerting, reducing mean detection time by **40%** across **200+ systems**.

Projects

Real-Time AI Crypto Trading Platform

Java 21, Spring Boot, Redis, Docker

- Built low-latency, event-driven Java backend using **Spring WebFlux, Project Reactor**, and **Redis Streams** to ingest and process real-time WebSocket market data at scale.
- Developed autonomous **AI trading agent** integrating an LLM to interpret natural-language commands and execute structured trading actions.
- Designed reactive microservices architecture with transactional data pipelines in **PostgreSQL**, supporting concurrent workloads, system extensibility, and fault isolation.

AI Travel Agent

Next.js, Node.js, TypeScript, Tailwind

- Created AI-powered travel planning system that collects user preferences and generates personalized itineraries, cutting planning time by **80%** for **50+ test users**.
- Built **Node.js** backend integrating multiple travel APIs with **LLM orchestration**, implementing CI/CD pipeline with **95%** test coverage.
- Designed responsive frontend with intuitive chat interface, handling complex state management for **100+ concurrent sessions**.

Technical Skills

Programming Languages: Python, TypeScript/JavaScript, Java, C++, C, SQL, HTML/CSS

Frameworks & Tools: Node.js, Express, FastAPI, Flask, Django, React, Next.js, Tailwind CSS, PyTorch,

scikit-learn, LLM APIs, REST APIs, Docker, GitHub Actions, Git, PostgreSQL, RabbitMQ, MySQL, Linux, AWS, Azure

Coursework: Distributed Systems, Data Structures, Operating Systems, Cloud Computing, Database Systems