TRAN NGOC HUNG

Backend Developer | Quantitative Developer | Pentester

👤 Profile

Backend & Quantitative Developer with 6 years of experience in FinTech systems, including cryptocurrency trading infrastructure, automated trading platforms, and banking application security. I have built high-performance exchange systems, matching engines, trading bots, and backend services interacting with blockchain networks and on-chain contracts. In addition, I have conducted security audits and penetration testing for banking web and mobile applications. My focus is on designing scalable, low-latency, and security-first financial systems for production environments.

💼 Employment History

Backend Engineer at Vietnam Silicon, Ho Chi Minh

Mar 2025 — Present

AgriTech Digital Transformation Platform

Contributed to the development of a large-scale agricultural traceability platform enabling end-to-end supply chain visibility from cultivation to export and consumer access.

Key Contributions:

- Designed and implemented backend microservices and RESTful APIs supporting full supply chain traceability (farmer, processor, distributor, consumer).
- Developed core services for product registration, cultivation lifecycle tracking, QR-based traceability, and inspection workflows.
- Architected and maintained distributed systems using Go and Python, leveraging NATS for event-driven communication, Redis for caching, and Airflow for workflow orchestration.
- Designed scalable data models using MongoDB and PostgreSQL to power analytics dashboards and operational monitoring.
- Designed and implemented an AWS image optimization workflow leveraging S3, Lambda, and CloudFront for dynamic image processing and content delivery, with development-level deployment and validation.
- Leveraged AI-assisted development tools to accelerate coding, debugging, refactoring, and automated test generation, improving development efficiency and code quality.

Freelance Developer

Jun 2025 — Aug 2026

Developed and deployed financial automation solutions focused on cryptocurrency portfolio management and investment analytics.

Key Projects:

- Designed and implemented backend services to synchronize

Details

Ho Chi Minh 700000
Vietnam
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Date of birth

25-05-2000

Nationality

Vietnam

Links

Linkedin
Github
Personal website

Skills

Research

Go, NodeJS, Python

Microservice, Distributing system

Web/App Security

Trading platform, fintech business

Group working, English

Languages

Vietnamese

English

Hobbies

Technology, finance, research, games, art, and swimming

and normalize Binance trading data (orders, trades, balances), with portfolio accounting logic including position tracking, trade aggregation, and realized/unrealized PnL computation.
- Integrated Telegram Bot API for user interaction and automated reporting, implementing data processing workflows to ensure accurate portfolio monitoring and performance analytics.

Tech Stack: Python, Telegram Bot API, API integration

Fullstack - Quantitative Developer at Nami Exchange, Ho Chi Minh
Mar 2022 — Mar 2025

Cryptocurrency Trading Platform & Blockchain Solutions

Passionate full-stack developer driving innovation in digital finance through high-performance cryptocurrency exchange systems, automated trading solutions, and blockchain technology applications—from core trading infrastructure to user-facing platforms and Web3 integrations.

Key Contributions:

- Designed and built a complete centralized exchange (CEX) platform supporting spot, swap, and futures trading with market, limit, stop, and OCO order types, including real-time market data feeds and depth book services.
- Developed a high-performance matching engine in Golang achieving **111,698 TPS benchmark** on a shared 4-core VPS, ensuring low-latency order execution and market stability.
- Architected an order routing and liquidity aggregation service integrating external exchanges to improve execution quality and trading depth.
- Built an Automated Market Maker (AMM) system in Golang to manage liquidity provisioning and price alignment with external markets.
- Developed a trading strategy backtesting platform in Python using historical market data to evaluate performance, risk exposure, and profitability.
- Implemented multi-chain blockchain integrations (Ethereum, BSC, Solana) for on-chain transaction monitoring, deposit/withdrawal processing, and wallet operations.
- Deployed distributed microservices architecture using Kafka, Redis, NATS, MongoDB, MySQL, and Docker.
- Conducted smart contract security reviews and penetration testing aligned with OWASP standards.

Develop Personal Projects, Ho Chi Minh
Sept 2022 — Mar 2023

Web3 Development & Blockchain:

- **Booking Care Dapp:** Create a decentralized application for booking healthcare services, leveraging blockchain technology to pay for services.
- **Charity DAO App:** Designed a decentralized autonomous organization application to streamline charitable donations and governance through smart contracts.

- **NFT Marketplace:** Developed a platform for minting, buying, and selling non-fungible tokens.

Security Project:

- **Web Vulnerability Scanner:** Engineered a tool to identify and assess security vulnerabilities in web applications, enhancing overall security posture.

Web/App Security Pentester at Techlab Corporation, Ho Chi Minh

Feb 2020 — Feb 2022

Security specialist with 2 years of experience in web/mobile app security, focusing on the financial sector.

- **Banking Security**: Testing more 10 web/app banking projects, identifying and mitigating vulnerabilities following **OWASP standards**.
- Experienced in blackbox testing, code auditing, cryptography (AES/RSA).
- Proficient in various security tools: Burp Suite, Acunetix, Frida, Jadx,...

◈ Education

Bachelor of Information Security, FPT University, Ho Chi Minh

Sept 2018 — Sept 2022

High-achievement subjects: Programming C, Java, Java OOP, Desktop Java Application, JS/HTML/CSS, Python, Database Systems, Data Structures and Algorithms, Networking, Web Security, Database Security

✦ Courses

Burp Suite Certified Practitioner, PortSwigger

Jan 2023 — Jan 2028

Certified Ethical Hacker (CEH), SaigonCTT

Jan 2021

Data Communications and Network Services, Cisco

Jan 2020

◀ References

Than Cong Dinh (Senior Developer) from Nami Foundation

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