Nguyen Ngoc Thai An

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About me

A skilled backend developer with expertise in Golang, Rust, and blockchain, I excel in creating scalable, high-performance solutions. My passion for solving complex problems drives me to deliver efficient, innovative systems. I'm always eager to embrace new challenges and apply emerging technologies in real-world applications

Education

MS	**Ho Chi Minh City of Technology**, Computer Science (In Progress)	Sep 2024 – Present
BS	**Ho Chi Minh City of Technology**, Computer Science	Sep 2019 – May 2024

- **Coursework:** Principles of Programming Languages, Data Structure and Algorithm, Computer Architecture, Software Engineering

Experience

ITD, Software Engineer

Ho Chi Minh
June 2022 – June 2023

- I actively contributed to the backend development of the iWater project, focusing on coding, database design, API development, and ensuring seamless integration with front-end components. My involvement covered the entire backend architecture, allowing me to gain in-depth experience in building and implementing key functionalities.

- I have an understanding of CI/CD processes, including automating build and deployment. This knowledge has helped me ensure smooth and efficient software delivery, improving overall development workflows and minimizing downtime.

- In the iSecurity project, I had the privilege of leading a team of interns. As the team leader, I provided technical guidance, coordinated tasks, and fostered a collaborative work environment, ensuring the team remained productive and motivated throughout the project.

VIETNAM BLOCKCHAIN INNOVATION - VBI, Research Assistant

Ho Chi Minh
Feb 2023 – July 2023

- As a research assistant at VBI, I created and published a series of blockchain Layer 1 tutorials on YouTube, focusing on educating viewers about the fundamentals of blockchain technology. These tutorials aimed to increase understanding and adoption of Layer 1 protocols, allowing me to share my expertise and contribute to the broader blockchain community.

- During this time, I also expanded my knowledge by studying advanced blockchain concepts such as Hyperledger Fabric, various consensus protocols, and zero-knowledge (zk) cryptography. This ongoing learning helped me deepen my expertise and stay current with the latest developments in blockchain technology.

VALUE BASE INNOVATION - VBI, Backend Engineer

Ho Chi Minh
July 2023 – Now

- As a Backend Developer at VBI, I designed and developed high-performance, scalable backend systems, focusing on API creation, database management, and real-time functionality using WebSocket in Golang. My work centered on ensuring efficiency and reliability across all systems.

- I further expanded my expertise by working on complex projects, including payment gateways, blog platforms, and tracking systems. This experience allowed me to continuously refine my skills in Golang, database optimization, and system architecture, contributing to the success of multiple projects.

- In March 2024, due to a team restructuring, I joined a new team responsible for

developing OpenEdu version 2 in Golang. I quickly adapted to the new codebase, collaborated effectively with teammates, and delivered critical features, including a notification system for event and marketing notifications, automated report services for marketing, blog services, and payment systems.

- Optimized slow APIs by integrating Redis for caching and improving database queries, resulting in enhanced system performance and faster response times.
- Implemented comprehensive observability using Jaeger, Prometheus, and Grafana to enhance platform monitoring and performance tracking, contributing to improved system reliability and faster issue resolution.
- Expanded my expertise by working on complex projects such as payment gateways, blog platforms, and tracking systems, continuously refining my skills in database optimization, and system architecture.

Projects

Openedu - Platform Learning and Hackathon
Openedu ↗

- Responsibility: Backend
- A microservices-based learning platform integrating payment gateways and blog features. My role focused on backend development using Go, Rust, and Axum
- Tools Used: Go and Rust, Postgresql, Mongodb, Jaeger, Prometheus, Grafana, protobuf,...

Build system manage OKRs and KPI
Work Flow Wise ↗

- Responsibility: Backend
- I have built: core features about manage OKRs and KPIs, manage employee, manage file upload/dowload,...
- Tools Used: Rust, Prisma

Build modular blockchain layer 1 (Etherium similarly)
Blockchain layer 1 ↗

- I have built: transport layer, block, transaction, crypto keypair, mempool, virtual machine,...
- Tools Used: Golang, BadgerDB

Technologies

Programing Languages: Rust, Golang and Typescript.

Framework & Platform: Gin-gonic (Golang), Gorm (Golang), Axum (Rust), Prisma (Rust + Golang), Jaeger, Prometheus, Grafana.

Database: Postgresql, MySql, MongoDB and Redis as a cached

Others:

- Understanding of OOP methodologies, SOLID principles and design patterns
- Hands-on experience a little with Cloud Computing Platform: AWS
- Experience in setting up CI/CD pipelines (github), using Docker,...