

NGUYEN TAN TAI

Portfolio: tantai.dev

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Software Engineer with hands-on experience building **Golang (Gin)** microservices in production, alongside **Python (FastAPI)** and **Node.js (TypeScript)** for AI-related workloads and IoT robot dispatcher logic. Strong background in on-premise infrastructure, having built and operated **Kubernetes** homelab environments with ESXi and supporting platform services, and experience using **AWS** in production. Currently focused on deepening expertise in Cloud and Cloud-Native Engineering, with an emphasis on Kubernetes, distributed systems, and scalable cloud infrastructure.

EXPERIENCES

TANCA.,JSC - Backend Developer (Part time)

Aug 2024 - Sep 2025

- Completed a 1-month intensive training program covering Golang (Gin), MongoDB, Mockery (unit testing), Jenkins CI/CD, Rancher, RabbitMQ, and Swagger/OpenAPI before joining the production team.
- Developed, maintained Golang (Gin) microservices in production, delivering scalable APIs for a large-scale HRM system.
- Designed and implemented the **Talent Management service**, handling multi-level performance evaluations and generating talent matrices to identify key personnel, including AI-assisted career path generation.
- Maintained, extended legacy core services for attendance and leave management, based on Vietnamese labor regulations.
- Built partner-specific integration features, including CSV exports of attendance and leave data for enterprise clients such as Xi Mãng Hạ Long and Decathlon.
- Developed a Payment Package middleware to validate package availability across multiple system sources.

ROBO-HI VIET NAM CO.,LTD - Backend Developer (Part time)

Otc 2025 - Dec 2025

- Worked in AWS environments supporting databases, logging, and command handling for robotic systems.
- Joined the Dispatcher team, focusing on the communication layer between end-user command systems and robot clients.
- Improved the MQTT-based communication layer by enhancing the MQTTConnection class to support multiple connections.
- Evaluated ROS 2 (Humble) and ROS 1 as alternatives to Redis Pub/Sub for robot message exchange.
- Contributed to distributed command dispatching logic for managing multiple robot types and robot fleets.

PROJECTS

SMAP – Distributed Social Media Analytics Platform

Live Demo: smap.tantai.dev

- SMAP is a large-scale social media analytics platform built with a product-oriented mindset, designed to support social listening and brand monitoring across platforms such as YouTube, TikTok, and Facebook. The system transforms raw, unstructured data into actionable insights through an asynchronous processing pipeline, ensuring reliability and efficiency in a distributed environment.
- SMAP is architected using microservices and event-driven design, with a strong focus on scalability, fault tolerance, and real-world operability. Core production patterns such as retry mechanisms, idempotency, failure isolation, and stateless services are applied from the ground up. Deployed on Kubernetes, the platform supports horizontal scaling and rolling updates, positioning SMAP as a backend platform ready for real-world usage, beyond an academic prototype.
- Key Technologies: Golang (Gin), Python (Worker Services), RabbitMQ, Redis (Pub/Sub), PostgreSQL, MinIO (S3), RESTful APIs, WebSocket, Docker, Kubernetes, SQLBoiler
- Github: [nguyentantai21042004/speech-to-text](https://github.com/nguyentantai21042004/speech-to-text), [nguyentantai21042004/analytics_engine](https://github.com/nguyentantai21042004/analytics_engine)

KANBAN - Task Management Web (Personal Project)

Live Demo: kanban.tantai.dev

- Techstacks: Golang (Gin), Next.js 14 (TypeScript), MinIO (S3-compatible), broadcast WebSocket, PostgreSQL.
- Github: [nguyentantai21042004/kanban-api](https://github.com/nguyentantai21042004/kanban-api), [nguyentantai21042004/kanban-web](https://github.com/nguyentantai21042004/kanban-web)

SKILLS

Frameworks: GIN(*), TypeScript, Laravel, FastAPI, Spring Boot,.
DevOps: Kubernetes(*), Rancher, Docker, ContainerD, Jenkins, Harbor, Nginx.

Infrastructure: PostgreSQL, MongoDB, Redis, RabbitMQ, MinIO.

Networking & Systems: Linux, pfSense, VPN.

Cloud Platforms: AWS (EC2, S3, IAM, VPC, Lambda), Terraform.

EDUCATIONS

Ho Chi Minh City University of Technology (HCMUT)

Bachelor of Engineering, Computer Science

Sep 2022 - May 2026 HCM, Vietnam

TOEIC Certificate

Score: 847