

# NGUYEN TAN LOI

Backend Engineer – Fintech Systems  
Golang | High-Scale Distributed Systems

Backend Engineer with 5+ years of experience building high-performance products, including fintech systems, using Golang, PostgreSQL, and microservices architecture. Proven expertise in rule-based evaluation engines, pipelines, and real-time transaction processing. Specialized in designing scalable backend services achieving sub-100ms latency at 5,000+ RPS.

## Contact

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### Address

Ho Chi Minh City

## Tech stack

### Database

PostgreSQL, MySQL, Redis

### Architecture

Microservices, Event-driven systems, System Design

### Messaging/Streaming

Apache Kafka, Google Cloud Pub/Sub, gRPC, RESTful API

### Cloud & DevOps

Google Cloud Platform (GCP), Kubernetes, Docker

### Monitoring

Prometheus, Grafana

## Core Strengths

- System Thinking
- Problem Solving
- Logical Thinking
- Ownership
- Collaboration
- Clean Code Practices

## Education

### 2020

University of Information Technology – VNUHCM

Degree classification: Very good

## KEY ACHIEVEMENTS

- Reduced loan approval time from days to <2min through pipeline automation
- Built rule-based engine processing 5,000+ TPS with p95 latency <100ms
- Reduced fraudulent transactions by 60% using configurable velocity-based fraud detection
- Executed core banking migration for 5M+ accounts with 100% data integrity and <30min downtime

## PROFESSIONAL EXPERIENCE

### Smartbit Technology

11/2025 – Present

Smartbit delivers gamification outsourcing solutions that boost engagement and drive business value.

- Role: Backend Engineer
- **GameHub & Promotion Platform**
  - Designed and developed backend services for a centralized GameHub platform, integrating multiple gamification mechanics and promotion campaigns to drive user engagement.
  - Built a flexible promotion engine supporting configurable reward rules, enabling business teams to launch and manage campaigns without code deployment.
- **CMS Dynamic Content Service**
  - Developed a dynamic content management service allowing real-time content updates across client applications, decoupling content delivery from application release cycles.
- **Wallet & Payment Service**
  - Built and maintained wallet and payment services handling financial transactions with strong consistency guarantees and auditability requirements.
  - Implemented event-driven workflows to ensure reliable transaction processing and reconciliation across distributed services.

*Key Technologies: Golang, PostgreSQL, Redis, Apache Kafka, Docker/Kubernetes, Microservices, Event-driven Architecture.*

### Cake by VPBank - A Digital Bank

04/2024 – 08/2025

Cake by VPBank is a mobile-first digital bank offering integrated payment and lending solutions, backed by a scalable and secure infrastructure.

- Role: Backend Engineer
- **Core Banking Migration**
  - Participated in planning, implementation, and release of core banking migration.
  - Ensured 100% data integrity and minimized downtime to less than 30 minutes during migration for over 5 million user accounts.
  - Addressed challenges in distributed transactions, system consistency, and compliance requirements.
- **Loan Origination System (LOS)**
  - Designed and developed a pipeline processing platform for the Risk Management Department to handle loan applications.
  - Implemented real-time processing stages with flexible decision workflows, enabling seamless integration across multiple financial products.
  - Reduced loan approval time from multiple days to under 2 minutes, significantly improving customer onboarding speed and scalability.
- **Product Evaluation Platform (Rule-Based Engine)**
  - Built a configurable rule-based evaluation engine for loans and transactions, enabling real-time validation with velocity controls to detect potential fraud at early stages.
  - Designed flexible rule configuration system allowing business teams to define and modify validation logic without code deployment.
  - Supported throughput of 5,000+ requests per second with p95 latency under 100ms, ensuring high performance and reliability.
  - Contributed to reducing fraudulent transactions by 60% during pilot deployment through intelligent rule-driven fraud detection.

*Key Technologies: Golang, PostgreSQL, Redis, Docker/Kubernetes, Google Cloud Platform, Microservices, gRPC/REST API, Event-driven Architecture, Distributed Systems, Observability (Prometheus, Grafana).*

### Anfin – Y Combinator - Fintech Startup

06/2023 – 02/2024

A YC-backed stock investment application.

- Role: Backend Engineer
    - Built a real-time commodity price streaming platform using WebSocket and event-driven architecture, serving 3,000+ concurrent users with sub-second latency.
    - Promoted to Team Lead after 6 months for technical leadership and effective cross-team collaboration.
- Key Technologies: Golang, GCP, PostgreSQL, WebSocket, Event-driven Architecture.*

### VNPT-IT

06/2020 – 06/2023

Digital transformation solutions for government and enterprise.

- Role: Backend Engineer
  - Developed backend microservices for large-scale government and enterprise projects, serving millions of users with strict security and compliance requirements.

*Key Technologies: Golang, GCP, PostgreSQL, WebSocket, Event-driven Architecture.*