

Nguyen Van Thanh

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PROFESSIONAL SUMMARY

Senior Software Engineer with 10+ years of experience building **data-intensive backend systems** in banking, fintech, and IoT domains. Strong background in **data pipelines, transactional data modeling, cloud-native microservices, and event-driven architectures**. Experienced in preparing **analytics- and ML-ready datasets**, optimizing large-scale databases, and integrating real-time data streams. Hands-on experience with **Python-based data processing and machine learning experimentation**, with a strong focus on production reliability, performance, and observability.

TECHNICAL SKILLS

Programming & Data: Java, Python, JavaScript, .NET; SQL, Pandas

Data Processing & Modeling: Batch and stream processing concepts, transactional data modeling, audit and history tracking, feature-ready dataset design

Frameworks & Platforms: Spring Boot (incl. WebFlux), Hibernate, .NET Core

Architecture: Microservices, RESTful APIs, Event-Driven Architecture

Cloud, DevOps & MLOps Concepts: AWS (EC2, API Gateway, S3, RDS, Lambda), Docker, Kubernetes, CI/CD pipelines, data quality checks, monitoring, model and data versioning awareness

Reactive & Streaming Systems: Non-blocking, event-driven application development using Spring WebFlux

Databases & Storage: PostgreSQL, Oracle DB, IBM DB2, MySQL, DynamoDB, Redis; performance tuning on large-scale datasets (millions of records)

Testing & Observability: Postman, WireMock, JUnit; production traffic monitoring and performance analysis

BPM & Workflow Systems: IBM BPM, SAG, Flowable; BPMN-based process automation

WORK EXPERIENCE

Senior Software Engineer (Data & Platform Focus)

Singtel/NCS, Singapore

May 2022 - Present

- Designed and implemented **high-throughput backend services and data pipelines** supporting cross-border remittance transactions.
- Modeled **transactional and historical datasets** to support reporting, compliance audits, and downstream analytics and machine learning use cases.
- Optimized database schemas and queries for **large-scale datasets**, significantly reducing transaction latency and improving throughput.
- Built **event-driven services** and caching strategies to handle peak traffic and real-time processing requirements.
- Monitored and analyzed **production traffic patterns**, identifying bottlenecks and improving system observability.
- Implemented **security, audit logging, and data encryption**, ensuring regulatory compliance for financial data.
- Provided **technical leadership and mentoring**, guiding team members on system design, data modeling, and performance optimization.

Senior Software Engineer

MoneyTap, Ho Chi Minh, Vietnam

Jan 2021 - March 2022

- Built core backend services for **credit issuance, repayment tracking, and interest calculation**, processing high volumes of financial transactions.
- Designed data models to support **real-time credit analytics and customer risk evaluation**.
- Integrated services with banking systems and payment gateways, ensuring **data consistency and transactional integrity**.
- Developed **mock APIs using WireMock** to enable parallel development and reduce integration risks.

Senior Software Engineer (IoT & Data Systems)

Onelink, Thailand

Aug 2019 - Oct 2020

- Designed and implemented **real-time data ingestion pipelines** for vehicle telemetry, including GPS, speed, and engine metrics.
- Built systems for **streaming, storing, and analyzing time-series data**, enabling live tracking and alerting.
- Supported analytics use cases such as driver behavior monitoring and predictive maintenance readiness.
- Participated in system analysis, architecture design, and end-to-end development.

Senior Software Engineer

Techcom Security, Hanoi, Vietnam

Oct 2017 - Aug 2019

- Led development of **workflow-driven backend systems** to automate complex financial and operational processes.
- Designed RESTful services and backend logic to support **process analytics and operational reporting**.
- Conducted code reviews and ensured data consistency across integrated systems.
- Deployed and managed applications on Linux environments, automating workflows via shell scripting.

Senior Software Engineer (BPM & Data Systems)

MB Bank, Hanoi, Vietnam

Apr 2014 - Oct 2017

- Designed and implemented **end-to-end automated workflows** for individual and corporate loan processing.
- Built backend services handling **high-volume daily transactions**, supporting millions in transaction value per day.
- Modeled business and transactional data to support compliance, reporting, and operational analysis.
- Configured deployment pipelines and monitoring systems for BPM applications.
- Developed custom modules for loan enquiry, appraisal, approval, and asset management.

Developer (Embedded & Data Acquisition Systems)

Elcom, Hanoi, Vietnam

May 2013 - Apr 2014

- Built vehicle prototypes using **Arduino-based sensors and microcontrollers**.
- Implemented embedded programs for **data acquisition**, navigation, and remote control.
- Gained early experience in **real-time systems and sensor data processing**.

SELECTED PROJECTS (DATA & ML-RELEVANT)

- **Dash Remittance Platform**, Built reactive APIs using Spring WebFlux to support **low-latency, high-throughput transaction processing**. Integrated global remittance partners (TELEPIN, THUNES, NETSCLICK, Western Union). Designed systems suitable for **real-time analytics and fraud detection extensions**.
- **Credit Line Platform**, Developed backend systems enabling flexible credit products, with data models designed for analytics and risk evaluation.
- **BPM Loan Processing Platforms**, Led BPM solutions for MB Bank and Techcombank, supporting **process analytics, auditability, and performance optimization**.
- **IoT-Based Vehicle Management System**, Designed real-time telemetry ingestion and alerting systems, enabling **time-series data analysis and monitoring**.
- **Unmanned Vehicle Projects**, Worked on unmanned air and surface vehicles using Arduino, gaining exposure to **sensor data, control systems, and embedded analytics**.

EDUCATION

Hanoi University of Science and Technology

Talent Engineer - Automatic Control

Hanoi, Vietnam

2008 - 2013