

Tran Pham Gia Bao

Senior Backend Developer

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SUMMARY

Senior Backend Developer with 5 years of experience building scalable, event-driven systems with Go, TypeScript, NestJS and NATS JetStream in healthcare and insurance. Experienced in distributed systems, high-throughput data processing, observability and database optimization, including migrating legacy monoliths and databases onto modern architecture.

EXPERIENCE

Senior Backend Developer · Fullerton Health — Jan 2023 – Present

Go services · Data processing & messaging

- Built a **high-throughput Excel import service** in Go on NATS JetStream with concurrent workers and multi-phase employee/dependent processing.
- Made processing reliable with idempotency, manual acks, retries, row-level tracking and failure recovery; used **Redis distributed locks** and tuned database transactions to prevent conflicts.
- Built an **email service handling 50,000 emails per day** across four portals.
- Built a Go **HTML-to-PDF export service** with OpenTelemetry tracing and cross-service request cancellation.

Fhnx · Legacy migration & event-driven core

- Migrated a legacy insurance monolith (claims, doctor lists, medication data) to service-oriented NestJS microservices.
- Built a reusable **NATS JetStream library** used across services: consumer discovery, custom decorators, manual ack/nak/term, DLQ routing, retry policies and traceId propagation via AsyncLocalStorage, designed for at-least-once delivery.
- Designed the full **observability stack** (OpenTelemetry, Grafana, Tempo, Prometheus, Loki) and built dashboards for system health, redeliveries, error rates and end-to-end traces.

Lisa · Claims insurance platform

- Led the end-to-end **migration from Oracle to MariaDB**, improving maintainability and performance.
- Implemented claims benefit calculation and validation in stored procedures, import modules for member and policy data, and RBAC.

Single sign-on · Client app to company portal

- Implemented **SSO with Shibboleth (SAML 2.0)** so client company users sign in from their app straight into the Fullerton portal with their organization account.

Apple Wellness · Employee health check-ups

- Built authentication and authorization, email delivery with Postmark, and scheduled file import from SFTP alongside direct upload.

Stack: Go, NestJS, NATS JetStream, TypeORM, MariaDB, MongoDB, Redis, SAML SSO, OpenTelemetry, Grafana

Full Stack Developer · Pika Tech — Jan 2021 – Dec 2022

- Built real-time chat and price negotiation between tourists and tour guides for the AppTourist and AppTourGuide apps.
- Developed the backend services and the mobile booking interface.

Stack: NestJS, TypeORM, MySQL, Socket.IO, Firebase, Goong Maps

PROJECTS

Home Order Food & Booking Menu 2025 · Solo

Food ordering and menu booking app built end to end. **Stack:** NestJS, GraphQL, Prisma, PostgreSQL, Next.js, TanStack Query, Jenkins, Cloudflare

Homelab Ongoing · Personal

Personal lab for infrastructure work, provisioned with Terraform and configured with Ansible.

Wedding Website 2024 · Freelance

Full-stack wedding website. **Stack:** Next.js, MongoDB

Go REST Backend 2023 · Freelance

REST API service for a client project. **Stack:** Go, Gin, GORM, MySQL

SKILLS

Languages	Go, TypeScript
Frameworks	NestJS, Gin, GraphQL, TypeORM, Prisma, GORM
Messaging	NATS JetStream, Socket.IO
Architecture	Event-driven microservices, at-least-once delivery, DLQ, idempotency, distributed locking
Databases	PostgreSQL, MariaDB, MySQL, Oracle, MongoDB, Redis
Auth & Security	SSO (SAML 2.0 / Shibboleth), RBAC, AWS Cognito
Cloud	AWS (EC2, S3, Lambda, API Gateway, Cognito, CloudFront), Firebase, Cloudflare
Observability	OpenTelemetry, Grafana, Prometheus, Loki, Tempo
DevOps	GitHub Actions, Jenkins, Terraform, Ansible
Services	Postmark, Twilio

EDUCATION

FPT University · Software Engineering 2018 – 2022

Front End Developer · Cybersoft 2019

LANGUAGES

Vietnamese Native

English Professional working