

# MUHAMMAD LUQMAN BIN YUSOFF

Full Stack Engineer — Go, Microservices & TypeScript

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## PROFESSIONAL SUMMARY

Results-oriented Full Stack Engineer who single-handedly designed, built, and deployed an enterprise e-commerce platform — **10 Go microservices, 4 frontend applications, and 21 Docker containers** across 23 repositories. Proven expertise in architecting production-grade distributed systems using Go, NATS JetStream, PostgreSQL, and Docker. Built resilience patterns (Saga, Event Sourcing, Circuit Breaker, Transactional Outbox) into a shared library powering the entire platform. Automated inventory synchronization across Shopee, TikTok Shop, and Lazada, reducing manual operations by 90%.

## TECHNICAL SKILLS

### Languages

Go (Golang) TypeScript JavaScript Python SQL

### Backend & Architecture

Microservices Clean Architecture DDD Event-Driven  
CQRS REST APIs

### Backend Frameworks & Libraries

Gin GORM NATS JetStream go-redis golang-jwt  
Zap Viper

### Resilience Patterns

Saga Orchestration Event Sourcing Transactional Outbox  
Circuit Breaker Distributed Locking

### Frontend

Next.js 14 React 18 Tailwind CSS shadcn/ui  
TanStack Query Zustand

### Databases & Storage

PostgreSQL Redis Meilisearch MinIO (S3)

### DevOps & Infrastructure

Docker Nginx GitHub Actions Linux Let's Encrypt  
Shell Scripting

### Observability & Security

OpenTelemetry Jaeger Sentry Prometheus Trivy  
Semgrep

## WORK EXPERIENCE

### Software Engineer (Sole Developer)

Aug 2023 – Present

Kilang Desa Murni Batik, Terengganu

Single-handedly designed, built, and deployed a complete enterprise e-commerce platform — 23 repositories, 10 Go microservices, 4 frontend applications, and 21 Docker containers running on a production Linux server.

#### Backend Architecture (Go / Gin / GORM)

- Architected and built **10 production microservices** using Clean Architecture and Domain-Driven Design: authentication, catalog, order processing, inventory, marketplace integration, customer management, agent/commission management, reporting, support ticketing, and notifications.
- Developed a **shared Go library (lib-common)** providing 11 middleware components (JWT auth, RBAC, CORS, CSRF, rate limiting, audit logging, compression, security headers, request ID, recovery, validation), resilience patterns, and domain utilities used across all services.
- Implemented **Saga Orchestration** with PostgreSQL state persistence for distributed transactions (e.g., order → payment → inventory → notification workflows).
- Built **Event Sourcing** infrastructure with PostgreSQL event store and NATS publishing, plus a **Transactional Outbox** pattern ensuring exactly-once event delivery.

- Implemented **Circuit Breaker, Bulkhead, and Retry with Backoff** patterns for resilient inter-service communication, with **Redis-based distributed locking** for concurrent operations.

service-auth	service-catalog	service-order	service-inventory	service-marketplace
service-customer	service-agent	service-reporting	service-support	service-notification

## Omnichannel Marketplace Integration

- Engineered real-time inventory and order synchronization across **Shopee, TikTok Shop, and Lazada**, eliminating overselling and **reducing manual operations by 90%**.
- Implemented **NATS JetStream** messaging for high-speed, real-time stock updates across all platforms, ensuring instant inventory consistency and preventing race conditions.
- Built webhook receivers for marketplace events (order creation, status updates, stock changes) with idempotency keys to prevent duplicate processing.

## Authentication & Security

- Built a complete **RBAC (Role-Based Access Control)** system with JWT access/refresh tokens, **TOTP/2FA** two-factor authentication, API key auth for service-to-service calls, and token blacklisting via Redis.
- Integrated **Curlec/Razorpay** payment gateway with idempotency keys and webhook verification for secure payment processing.

## Frontend Development (Next.js 14 / React / TypeScript)

- Built **4 web applications**: admin dashboard (shadcn/ui, TanStack React Query, Recharts), customer storefront (Zustand, Framer Motion, Embla Carousel), sales agent portal, and warehouse management PWA.
- Implemented **BFF (Backend-for-Frontend)** pattern with Next.js server-side rendering and internal API proxy for secure data fetching.
- Built form validation with **React Hook Form + Zod**, data visualization with **Recharts**, and E2E testing with **Playwright** and **Jest**.

## Database Architecture (PostgreSQL 16)

- Designed **schema-per-service isolation** (15+ PostgreSQL schemas) with 23+ sequential migrations, bi-directional sync triggers between catalog and inventory, and optimistic locking for concurrent writes.
- Implemented **CQRS** pattern: PostgreSQL for writes, **Meilisearch** for full-text product search, and **Redis** caching for high-performance read operations.
- Built **MinIO (S3-compatible)** storage for product images and payment receipts, with AI-powered background removal via **rembg**.

## DevOps & Infrastructure

- Orchestrated **21 Docker containers** via Docker Compose on a Linux VPS with per-container memory and CPU resource limits, JSON-file logging with rotation, container hardening (no-new-privileges, cap\_drop: ALL), and Alpine-based images for minimal attack surface.
- Configured **Nginx** reverse proxy with multi-domain routing, SSL termination (Let's Encrypt), rate limiting (API: 10 req/s, login: 30 req/min), response caching, and WebSocket support.
- Built **GitHub Actions CI/CD** pipelines: automated deployment with SSH, health checks every 6 hours, and **weekly security scanning** (Trivy, TruffleHog, Semgrep, govulncheck, npm audit).
- Implemented **automated daily PostgreSQL backups** with SHA-256 verification, MinIO remote storage, 30-day retention, and pre-deployment backup safety net.
- Set up **OpenTelemetry + Jaeger** distributed tracing and **Sentry** error tracking across critical services, with Slack alerting for deployment and infrastructure events.

## Notification & Communication System

- Built an event-driven notification service (pure NATS consumer, no HTTP server) with **Twilio** SMS and **GoMail** SMTP email delivery using HTML templates.
- Integrated **SF Express** shipping API for automated shipment tracking and logistics management.

## Robotic Welding Technician

Erect Engineering Presswork

Jan 2022 – Feb 2023

- Operated and troubleshoot automated MIG robotic welding systems for automotive clients (Proton & Honda), developing analytical and troubleshooting skills now applied to software debugging and system reliability.

## EDUCATION

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### Diploma in Electrical and Electronic Engineering

June 2017 – Apr 2020

Politeknik Ibrahim Sultan, Pasir Gudang, Johor

## ADDITIONAL SKILLS

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### AI & Automation

Prompt Engineering   Local LLM (Ollama)  
OpenAI/Anthropic API   n8n / Make.com

### Analytics & Growth

GA4   GTM Server-Side   Conversion API   Technical SEO  
Core Web Vitals