

# Muhammad Yusuf Rifqi Nurfadillah

Backend Engineer · Go & Distributed Systems

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## ABOUT

Backend Engineer with ~4 years of experience building distributed systems, event-driven microservices, and high-throughput APIs in Go and Python. Experienced across the full backend lifecycle — service design, queue-driven async processing, geospatial systems, observability, and deployment. Currently at PT. eDesk Teknologi shipping integration-heavy products for enterprise clients. Open to backend-heavy roles at product companies or growth-stage startups.

## EXPERIENCE

### Backend Engineer (Cross-functional)

Jan 2026 – Present

**PT. eDesk Teknologi** · Jakarta Selatan · Full-time

- Took end-to-end ownership of backend services and web-facing layers for integration-heavy products.
- Reduced latency on integration-bound APIs by optimizing Redis caching strategy and queue handoff logic.
- Designed dead-letter queue and retry policies for high-volume ingestion workers, improving job completion rate under failure scenarios.
- Owned service reliability end-to-end: deployment, monitoring, alerting, and incident response.

*Stack: Go, Python, TypeScript, PostgreSQL, Redis, Kafka, RabbitMQ, Elasticsearch, Docker, React, Next.js*

### Back End Developer

Sep 2023 – Jan 2026 · 2 yr 4 mo

**PT. eDesk Teknologi** · Jakarta Selatan · Full-time

- Architected microservice boundaries for integration-heavy products with centralized API gateway and queue-first async workflows.
- Built MVT tile-serving pipeline (Go/PostGIS) handling millions of geospatial features across 5+ infrastructure domains — eliminated per-request GeoJSON serialization via database-layer tile generation, reducing response payload size significantly.
- Designed Social Network Intelligence platform: end-to-end graph pipeline from social media ingestion → relationship extraction → Gephi community detection → real-time WebSocket delivery to interactive visualization clients.
- Maintained Kafka and RabbitMQ queue-driven workflows with idempotent workers, dead-letter handling, and backpressure policies for async processing at scale.
- Developed LLM-integrated applications and agent workflows for enterprise clients using Claude and OpenAI APIs.

*Stack: Go, Python, PostgreSQL, PostGIS, MongoDB, Redis, Elasticsearch, Kafka, RabbitMQ, Docker, Kubernetes*

### Back End Developer (Contract)

Jan 2023 – Sep 2023 · 9 mo

**PT. eDesk Teknologi** · Jakarta Selatan · Hybrid

- Built REST APIs, web services, and data pipelines across multiple client projects in Go and Python.
- Implemented async communication patterns including WebSocket and Server-Sent Events (SSE) for real-time features.
- Integrated RabbitMQ and Apache Kafka for distributed messaging and event-driven workflows in Go services.

*Stack: Go, Python, RabbitMQ, Kafka, PostgreSQL, MongoDB*

### Back End Developer (Intern)

Jul 2022 – Dec 2022 · 6 mo

**PT. eDesk Teknologi** · Jakarta Selatan · On-site

- Developed REST APIs and backend data processing logic in Python and Go in production-adjacent environments.
- Built web scraping and data cleaning pipelines for automated data collection and preprocessing.
- Contributed to a report generation engine producing PDF, PPT, and Word documents via Python libraries.

*Stack: Python, Go, PostgreSQL, MySQL, MongoDB, Redis, Elasticsearch*

## KEY PROJECTS

### Geospatial Visualization Platform

2024

*Go · Gin · PostgreSQL · PostGIS · Mapbox GL JS*

- Built MVT tile-serving architecture generating vector tiles at the database layer (PostGIS), enabling tile-based rendering across millions of geospatial features with minimal network overhead.
- Implemented dynamic point clustering aggregating high-density markers by zoom level; supports 5+ infrastructure domains (BTS/cell sites, fiber optic, data centers, transportation, public facilities) in a single map view.

- Optimized spatial queries and tile delivery via PostGIS spatial indexing; multi-layer system allows per-domain enable/disable and feature detail inspection.

### Social Network Intelligence Platform

2024

*Go · Gin · Elasticsearch · MongoDB · WebSocket · Gephi Toolkit*

- Designed end-to-end graph processing pipeline: social media data ingested into Elasticsearch → relationship extraction from mentions, replies, and reposts → Gephi community detection → real-time graph streaming via WebSocket.
- Integrated Gephi Toolkit (Java) with Go services for modularity analysis, cluster detection, and degree centrality calculation on large-scale interaction networks.
- Dual-store architecture: Elasticsearch for fast query retrieval, MongoDB for processed graph persistence.

### QRIS Payment Gateway Microservice

2023

*Python · FastAPI · PostgreSQL · Redis · Docker*

- Implemented Factory + Abstract Base Class pattern for dual-gateway support (Midtrans + Xendit) with automatic failover — provider switching is fully transparent to the POS client.
- Built webhook handlers with SHA-512 signature verification (Midtrans) and callback-token verification (Xendit) for secure, tamper-proof payment confirmation.
- Real-time order status broadcast via Redis Pub/Sub to kitchen displays and cashier monitors — replaced slow polling with event-driven updates.

### Attendance Management System

2023

*Go · Gin · MongoDB · JWT*

- Full attendance lifecycle: check-in/out, late detection, GPS coordinate validation, shift configuration, and multi-day leave approval workflows.
- Timezone-aware business logic for a multi-tenant property management backend supporting multiple organizational units.

## SKILLS

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**Languages:** Go (primary), Python, TypeScript, JavaScript, Node.js

**Databases:** PostgreSQL, PostGIS, MongoDB, MySQL, Redis, Elasticsearch, ClickHouse

**Messaging:** Apache Kafka, RabbitMQ, Beanstalkd

**Frameworks:** Gin, FastAPI, Express.js

**DevOps:** Docker, Kubernetes, GitLab CI, Jenkins, Linux, Amazon S3

**Other:** Microservices, REST API, WebSocket, gRPC, JWT, GORM, LLM / AI integration

## EDUCATION

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### SMKN 4 Padalarang

2020 – 2023

Vocational High School Diploma, Software Engineering