Muhammad Faiz bin Kasman

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PROFESSIONAL SUMMARY

Software Engineer specializing in platform infrastructure, payment systems, and operational tooling. At Shell Malaysia, built fraud detection systems recovering six figures in revenue, engineered credit migration and refund infrastructure serving 50,000 users, and designed dynamic pricing systems that increased off-peak utilization by 30%. Independently built and launched JomJual, a multi-tenant e-commerce SaaS platform for the Malaysian market. Experienced with AWS Lambda and CloudWatch in production environments. Strong in Node.js, TypeScript, NestJS, PostgreSQL, Redis, and queue-based architectures. Active user of AI development tools (Claude, Cursor, OpenRouter) as a productivity multiplier.

TECHNICAL SKILLS

Backend: Node.js, NestJS, TypeScript, PostgreSQL, Redis, BullMQ, REST APIs, tRPC, Drizzle ORM, Prisma, WebSockets, OAuth 2.0, Webhooks

AWS & Infrastructure: Lambda, CloudWatch, API Gateway, SQS, SNS, EventBridge, DynamoDB, S3, EC2, Docker, Nginx, CI/CD

Payments & Fintech: Stripe API, Razorpay/Curlec, Refund Processing, Financial Reconciliation, Fraud Detection, Billing Systems

Frontend: React, Next.js, Tailwind CSS, Figma, Google Stitch

Blockchain: Solidity, Arbitrum, LayerZero, Web3.js

AI Tooling: Claude, Cursor, OpenRouter

WORK EXPERIENCE

Software Developer | ParkEasy — Shell Malaysia | Kuala Lumpur | *Oct 2024 — Present*

- Built fraud detection system identifying 0kWh charging sessions — sessions consuming user credits without energy delivery. Ran full historical analysis across the platform's lifetime, uncovering **six figures in revenue discrepancies**. Root cause traced to a data timing issue between Longship (charger SaaS) and billing engine; fixed by switching from totalKwh to chargingPeriods meterValue. Automated clawback system recovered **~60% of outstanding amount**.
- Engineered end-to-end credit migration system for ParkEasy's sunset across **50,000 users** — consent flows with OTP verification, account freezing, real-time control center dashboard, **Stripe API** integration for automated refunds, CSV reconciliation workflows for migrations, and a **refund forecasting module** showing finance daily obligations against Stripe balance to ensure SLA compliance.
- Designed and implemented dynamic pricing pilot across 5 sites using quartile analysis on historical session data to define peak and off-peak windows. Built cron-based config switching with automated EC2 restarts to apply pricing changes. Results: **~30% increase in off-peak utilisation** across all sites. Rollout to broader network in progress.
- Architected platform health monitoring system using **AWS Lambda** scheduled via **CloudWatch** to continuously poll health check endpoints across all codebases, with Slack alerting on status changes. Investigated root cause of recurring outages — excessive logging filling server storage — and implemented **three-layer defence**: automated log rotation at storage threshold, memory-based auto-restart, and the alerting layer.
- Built full transactional email pipeline with four lifecycle templates (migration notice, refund notice, migrated confirmation, refunded confirmation), delivery monitoring dashboard with failure visibility and automatic retries.
- Developed internal tooling for Customer Support and Operations — manual session termination for stuck parking/charging sessions, S3 configuration management with versioning and dry-run validation, and barrier control tools — reducing operational escalations and improving incident resolution time.

Digital Executive — Full Stack | Myra — OIB Marketing Sdn. Bhd. | Petaling Jaya | *May 2024 — Sep 2024*

- Saved **RM15,000** in development costs by converting WordPress landing pages to full-code solutions using modern tech stack.
- Led end-to-end development of Laravel-based applications including backend API design, database schema planning, and data-centric UI implementation.

Lead Technical — E-Commerce | Digital Dinero Sdn. Bhd. | Penang | *Dec 2022 — Mar 2024*

- Led end-to-end UI/UX and technical execution across **69 production e-commerce websites** for Malaysian single-product sales pages.

KEY PROJECTS

JomJual — Multi-Tenant E-Commerce SaaS Platform — *Next.js 15, TypeScript, tRPC, Drizzle ORM, PostgreSQL, Supabase* [View Website]

- Designed and built a full-stack multi-tenant e-commerce platform for Malaysian merchants — 3 Next.js applications (storefront, dashboard, admin) in a **Turborepo monorepo** with 4 shared packages, **14 database tables** with full relations, and **11 tRPC routers with 60+ procedures**.
- Implemented subdomain-based multi-tenancy with middleware-level tenant isolation — Next.js middleware extracts subdomain, injects store context header, and all database queries enforce **store_id filtering** at the tRPC procedure level with four-tier RBAC (public, storefront, merchant, admin).
- Built transactional checkout flow with inventory decrement, **Razorpay/Curlec** payment integration with **HMAC-SHA256 signature verification** (timing-safe comparison), real-time shipping rate calculation via EasyParcel API, and a voucher system with scope, usage limits, and first-time buyer targeting.
- Engineered financial settlement pipeline tracking merchant payouts through a **4-stage lifecycle** (pending → on_hold → available → withdrawn) with automated commission calculation, bank account management across 20 Malaysian banks, and CSV export.

Lunara — Multi-Channel Inventory Sync Engine — *NestJS, PostgreSQL, Redis, BullMQ, Docker* [View Website]

- Architected production-grade OMS preventing overselling by maintaining unified Master Stock with real-time sync to Shopee, TikTok Shop, and Lazada at **<3s target latency**.
- Built BullMQ job queue system with priority-based queues (P1: inventory updates, P2: order ingestion, P3: product sync), configurable retry strategies, and per-platform rate limiting — equivalent to AWS SQS-based event-driven architecture.
- Deployed full stack with Docker Compose — NestJS backend, Next.js frontend, PostgreSQL, Redis, Nginx reverse proxy with SSL via Let's Encrypt.

Signet Protocol — Decentralized Identity & Performance Bond Layer — *Solidity, Arbitrum, LayerZero [Private Repo - Available on Request]*

- Designed blockchain-based performance bond system replacing CAPTCHAs with economic accountability via staked USDC collateral and programmatic slashing. Architected three smart contracts on Arbitrum: SignetRegistry (agent DID system), SignetVault (stake/slash mechanics), and SignetResolver (cross-chain verification via LayerZero V2 with Merkle proof validation).

CERTIFICATIONS

IBM Data Engineering Specialization • Google Data Analytics Specialization

EDUCATION

BSc in Mechanical Engineering — Purdue University | *May 2017 — Aug 2020*