MUHAMMAD WAIZ WAFIQ BIN MOHAMAD JAFRI

Software Engineer · Go, TypeScript & Event-Driven Systems

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PROFILE

Sole engineer on a four-application production platform: a Go REST API, an async FastAPI service and two React 18 + TypeScript SPAs running on one shared PostgreSQL, used daily by an operations team serving 791 students and 92 tutors. Built its event-driven layer, including transactional outbox delivery, Postgres LISTEN/NOTIFY, WebSocket push and a scheduler with advisory-lock leader election. Two and a half years shipping production software across commerce, education, healthcare and government analytics, including a state government analytics rebuild that recovered RM 1.65 million within two months of launch.

TECHNICAL SKILLS

Languages Go, TypeScript, Python, JavaScript, SQL

Backend & Event-Driven Go (pgx), FastAPI, Node.js (Express), Flask, Django, PostgreSQL, Redis, MongoDB, MySQL, Kafka, Spark, Prisma, Drizzle; transactional outbox, LISTEN/NOTIFY, WebSockets, advisory-lock scheduling, REST API design

Frontend React 18 (Vite), Next.js, TypeScript, Redux, MUI, Tailwind, Turborepo, Cypress, Rollup bundle analysis, route-level code splitting

Infrastructure & Security Docker, blue/green deploys behind nginx, GitHub Actions CI, AWS (SageMaker, RDS, DynamoDB), DigitalOcean, Vercel, Git; CSP with SRI pinning, DOMPurify, content-sniffing upload validation, trusted-proxy rate limiting

AI & ML Retrieval-augmented generation (dual-retrieval), LangGraph multi-agent orchestration, tool calling, groundedness and hallucination evaluation, PyTorch, scikit-learn, YOLOv8, ONNX, NVIDIA Jetson edge inference; daily use of Claude Code and Cursor

PROFESSIONAL EXPERIENCE

Afterkelas.com March 2025 – Present

Founding Engineer (first engineering hire) · Remote · Malaysian online tutoring platform

- Sole engineer on a four-application platform: a Go REST API, an async FastAPI service and two React 18 + TypeScript SPAs, all on one shared PostgreSQL.
- Built the Go API across 45 domain packages on pgx, with 162 versioned migrations under a numbering and immutability rule enforced in CI.
- Built the event-driven layer: transactional outbox tables for push and email delivery, Postgres LISTEN/NOTIFY for cross-process events, WebSocket push for live notifications, and a scheduler engine with advisory-lock leader election and per-job runtime kill switches.
- Own the operations SPA used daily by the admin team, covering scheduling, billing, claims, tutor onboarding and reporting.
- Kept a 6,535-module React/TypeScript app buildable in CI: replaced a ~10,000-module icon barrel with deep-path imports enforced in ESLint, split routes into 438 lazy chunks and moved to incremental type-checking, verifying each change against Rollup bundle analysis.
- Closed an IDOR class across all four codebases by moving every public entity to opaque prefixed identifiers resolved at the HTTP boundary, keeping integer primary keys internal. Also shipped content-sniffing upload validation, trusted-proxy IP rate limiting, edge CSP with SRI-pinned scripts and DOMPurify on every HTML sink.
- Built the billing domain end to end across API and admin UI: invoices, line items, refunds, waivers, offsets, receipts and automated reminders.
- Wrote a Go release TUI that runs dependency-ordered API-then-frontend deploys with migration collision detection and rollback, behind GitHub Actions CI and Docker blue/green on nginx. Ship through trunk-based feature slices behind flags.
- Retired the manual tutor matching, scheduling and spreadsheet record-keeping the business previously ran on. The platform serves 791 active students and 92 tutors, and processed 155 student and 28 tutor registrations in Q2 2026.

Fylix September 2024 – Present

Founding Engineer · Remote · AI chat commerce platform

- Built the FylixChat frontend, which turns WhatsApp, Telegram and Facebook Messenger into automated sales channels for merchants.
- Shipped the merchant dashboard, multi-platform chat management, a product catalogue with variant handling, order lifecycle tracking, and a messaging template builder with dynamic parameter detection.
- Integrated Stripe, iPay88 and ToyyibPay for subscription billing and payment processing, writing the ToyyibPay SDK from scratch against the provider's API.

Universiti Malaya March 2025 – Present

Research Assistant (Contract) · Remote · Master's research project

- Built NavKanMy, a breast cancer risk assessment platform with separate patient and clinician portals, delivered with the Ministry of Health and Universiti Malaya.
- Re-architected the chatbot around an event-driven pipeline, decoupling retrieval and generation from delivery so long-running clinical lookups no longer block the response path.
- Designed a dual retrieval-augmented generation architecture behind the multilingual chatbot, separating patient education material from clinical practitioner guidance so each audience retrieves only from its approved corpus.
- Validated responses against Ministry of Health-approved guidance alongside university clinicians, with clinician signoff required before any response reached production.

Universiti Tenaga Nasional (UNITEN) October 2024 – July 2026

Research Officer (Contract) · Remote

- Built the MyRA AI prototype, a platform for Malaysian universities to measure, track and forecast research output against the COMPASS scoring framework.
- Anchored the platform to the research office's existing Excel workbook as a single source of truth, so every score the system reported reconciled against the file the office already relied on.
- Trained grant success prediction models and exposed feature importance, showing research offices which application attributes drove funding outcomes.
- Delivered drag-and-drop Kanban boards, automated Gantt scheduling and what-if scenario simulation for research planning teams.

TAJDID Corporation Sdn. Bhd. March 2024 – February 2025

AI & Big Data Executive · Terengganu, Malaysia

- Re-engineered TAJDIDlytics, a social media analytics platform used by Terengganu state government agencies. The rebuild recovered RM 1.65 million in losses within two months of launch and contributed to a 13.8% revenue increase in Q4 2024.
- Built a data lakehouse that crawls the major social platforms and scores sentiment across monitored agency accounts.
- Introduced end-to-end test coverage, catching defects before release rather than after it.
- Delivered a licence plate recognition system for the Besut Land and District Office, running YOLOv8 on NVIDIA Jetson Nano for on-site inference.

Gas Business Digital, PETRONAS July – December 2022

Business Analyst (Internship) · On-site, Malaysia

- Built BIG SONAR, pairing web crawlers with AI models to identify and classify emerging digital innovations relevant to the Gas Business.
- Cut technology scouting cycles from weeks to minutes. The project secured RM 500,000 in funding for continued development.

SELECTED PROJECT

Theta Agents SDK August 2024

Creator and sole developer · Champion, Theta Network Hackathon 2024

- Python library for building autonomous AI agents on Theta EdgeCloud, using LangGraph to orchestrate multi-agent workflows. Reduced deployment of a working agent to five lines of code.

EDUCATION

Universiti Malaya, Kuala Lumpur October 2020 – August 2024

Bachelor of Computer Science (Artificial Intelligence)

- CGPA 3.83 / 4.00, First Class Honours. Nominated for Anugerah Projek Akademik Cemerlang (APAC) 2024.

AWARDS & COMPETITIONS

Champion, Theta Network Hackathon 2024 (international) · Solo Champion, UMDAC Datathon 2023 · Champion, UMHackathon 2022 · Third Place, UMHackathon 2021 · Fourth Place, I-Hax IIUM 2023 · Top Ten Finalist, NUS Fintech Month Hackathon 2023 (international)

SPEAKING & MENTORSHIP

Speaker, Kaggle Mavericks Workshop (2023), a four-hour practical data science workshop for 28 peers. Speaker, Innovative Wednesdays (2023), on generative AI and the art industry. Mentor, MYStartup Hackathon (2023), where one of two teams mentored reached the finals for the PETRONAS problem statement.

ADDITIONAL INFORMATION

Languages Bahasa Malaysia (native), English (professional working proficiency). **Work authorisation** Malaysian citizen, no sponsorship required. Currently remote from Terengganu; open to relocating to Kuala Lumpur. **References** Available on request.