Syifa Maulaya

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linkedin.com/in/syifamaulaya | github.com/alterashy | Portfolio

Full-Stack Developer with 10 months of professional experience architecting, containerizing, and operating production microservices for AI-powered industrial IoT and healthcare systems. Delivered 7 full-stack projects spanning manufacturing (fertilizer, food, cosmetics) and healthcare (clinic chatbot) domains, designing NestJS/FastAPI backends, Next.js frontends, real-time data pipelines (Socket.IO, Redis Streams, MQTT), and Docker-based infrastructure.

PROFESSIONAL EXPERIENCE

Full-Stack Developer | Widya Robotics
October 2025 – August 2026
Built full-stack web applications for AI-powered industrial monitoring and healthcare products. Designed backend APIs, frontend dashboards, real-time data pipelines, and production infrastructure across manufacturing and healthcare sectors. Containerized, deployed, and operated multi-service stacks in production, including AI computer vision workers and RAG/LLM services.

- AI Conveyor Sack-Counting System (Fertilizer Manufacturing): Took over live production system via developer handover and maintained stability through cross-stack bug fixing (React ↔ NestJS ↔ PostgreSQL/Redis ↔ YOLO AI) on internal factory server. Rewrote entire system from scratch as a modern multi-service architecture with Next.js frontend, Konva canvas ROI, and PostgreSQL database.
- AI Smart-Factory Counting System (Food Manufacturing): Architected and built a production microservices system with a modular NestJS backend (TypeORM, PostgreSQL, Redis, Socket.IO, Swagger). Implemented end-to-end IoT integration: computer vision detection → MQTT relay commands → physical lamp/buzzer actuation on the factory floor. Built Next.js frontend with live HLS streaming, Konva canvas ROI detection zones, S3-compatible snapshot storage, and PDFKit/ExcelJS report exports.
- Internal Vision Monitoring PoC Dashboard: Built full-stack PoC (NestJS + Prisma 7 + Next.js) for real-time AI-vision monitoring with camera health-checks (fluent-ffmpeg RTSP probing), AI worker controls, MQTT lamp actuation, and Redis daily counters.
- AI Quality-Control System (Cosmetics Manufacturing): Architected a decoupled microservices system (API Service, Event worker, Python YOLO AI, MediaMTX/FFmpeg, Next.js). Implemented TimescaleDB hypertables for high-throughput time-series QC detection data with batch ingestion aligned by timestamps for precise video overlay synchronization. Built a Redis Streams → Redis Pub/Sub → WebSocket fan-out pipeline for scalable real-time event distribution. Added Prometheus metrics (`prom-client`) and NestJS Terminus health checks.
- Corporate Landing Page & Mock Camera Tooling: Built bilingual (ID/EN) Next.js static marketing site with GitLab CI/CD to Vercel deployment pipeline. Created Docker-based mock-camera testing infrastructure (MediaMTX +

FFmpeg + Flask mock ISAPI) that de-risked development of camera-dependent AI features.

- AI Clinic Chatbot / RAG (Healthcare Sector): Built full-stack product around team's RAG engine: modular FastAPI backend, Next.js role-based portals, embeddable widget, and mock CIS service. Implemented 3-role RBAC, RSA-SHA256-signed webhooks, and PostgreSQL + pgvector schema with SQLAlchemy 2.0 async ORM. Deployed, containerized, and operated production RAG stack (LangChain, OpenAI GPT-4o, pgvector hybrid retrieval).

TECHNICAL SKILLS

- Full-Stack & APIs: TypeScript, Python, NestJS, FastAPI, Next.js, React, Node.js, Tailwind CSS, RESTful APIs, OpenAPI
- Databases & Real-Time: PostgreSQL (pgvector, TimescaleDB), Redis (Streams, Pub/Sub), Socket.IO, MQTT, Prisma, TypeORM, SQLAlchemy
- AI & Media Integration: Computer Vision (YOLO service integration), RAG/LLM APIs, RTSP/HLS Video Streaming (MediaMTX, FFmpeg)
- DevOps & Architecture: Microservices Architecture, Docker, Docker Compose, Nginx, S3 Storage, Prometheus, Git, CI/CD

EDUCATION

Bachelor of Computer Science — University of Technology Yogyakarta (July 2020 – August 2024 | GPA: 3.69/4.00)

NON-FORMAL EDUCATION

Full-Stack Developer Bootcamp — DumbWays Indonesia (December 2024 – July 2025)
Built full-stack applications using React, Express, PostgreSQL, RESTful APIs, and Git workflow

PROJECTS

- Circle — Threads-like Social Media Platform (React, Express.js, PostgreSQL, Prisma ORM): Developed full-featured social media platform with real-time posting, replies, likes, follow system, JWT authentication, infinite scroll pagination, and 95+ Lighthouse score.
- BookUs — Bus Ticket Booking Platform (React, Supabase, Midtrans Snap API): Built dual-interface platform for customers and admins with guest checkout, secure Midtrans payment integration via Supabase Edge Functions, and admin dashboard.
- MieVerse — Instant Noodle Catalog & Review Platform (Next.js, PostgreSQL, SSR): Designed multi-criteria rating system, advanced search and filtering, achieving 98+ Lighthouse SEO score.