

Rafi Irtiza Rasa

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SUMMARY

Full-stack engineer, 6+ years as the sole developer at a INGO where I designed and built a 5-app production ecosystem processing 1M+ data points. I've shipped production software across 7 languages and multiple platforms — Python, JS/TS, Kotlin, Java, C#, PHP, SQL. On top of that, I do commercial work (fintech security, e-commerce, education platforms) and build AI tools with RAG and OpenAI. Published researcher.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, PHP, Kotlin, Java, C#, SQL

Frontend: React 18/19, Next.js 14, Vue 3, Tailwind CSS, Vite, Alpine.js

Backend: FastAPI, Laravel 11/12, Custom PHP MVC, .NET 4.8

Database: PostgreSQL, MySQL, SQLite, ChromaDB (vector DB)

Mobile: Android SDK, Jetpack Compose, Kotlin Coroutines/Flow, Retrofit, Firebase

AI/ML: OpenAI API (GPT-4o, Embeddings), RAG, LangChain, Vector Search (HNSW, cosine similarity)

Testing: PHPUnit, Playwright, Vitest, JUnit, MockK, Selenium

Security: RBAC (115+ permissions), Threat Detection, JWT, Sanctum, AES Encryption

DevOps: Nginx, Docker, Git, PM2, Linux/VPS, IIS

EXPERIENCE

Software Engineer — Max Foundation Bangladesh (Netherland based INGO) | Dhaka | Nov 2019 – Present

Sole engineer for the entire Bangladesh office — coordinating with program teams and 8+ partner organizations including World Vision and Action Against Hunger. 125+ end users.

- Built and maintain the entire software ecosystem — 5 applications (Android, C# desktop, PHP web), 1M+ data points across 4 health/WASH programs, serving 8+ partner organizations
- Designed a form generation system driven by database configuration — field teams deploy new surveys without any code changes, replacing what was a 2-week recompilation cycle
- Designed and delivered a healthcare platform in Kotlin/Jetpack Compose — 70+ screens, offline-first architecture with sync built for remote clinics with unreliable connectivity
- Built analytics dashboards tracking child nutrition across 100K+ records — WHO z-score computation across 3 malnutrition indicators, deployed across desktop and web platforms
- Built the organization's HR platform from scratch in PHP — 13 modules, 115+ fine-grained permissions, 85% test coverage with PHPUnit
- Added an AI-powered import pipeline to the company blog that converts Word docs to published articles — previously 2+ hours of manual work, now about 5 minutes

Technical Consultant — Funded Academy (Fintech) | Sep 2025 – Present

Infrastructure, security, and vendor management for a multi-app prop trading platform.

- Set up cross-layer RBAC auditing and centralized Nginx IP blocking across 5 sites, with automated threat detection and retroactive log analysis
- Built a pre-launch analytics platform with Laravel 12 and Vue 3 — real-time visitor tracking, threat monitoring, automated response, and 10+ visitor dimension tracking

Freelance Full — Stack Developer | 2024 – Present

- Delivered an e-commerce platform with Next.js 14, TypeScript strict mode, PostgreSQL, and Prisma — 23 API endpoints, dual-role auth via NextAuth.js, deployed on a self-managed Ubuntu VPS
- Built an education platform with Laravel 11 and Vue 3 — anonymized student-donor matching with privacy-first architecture, 35+ tables, 95+ REST endpoints

Consultant (Data Analyst) — The World Bank | Aug 2024

Data validation, analysis, and visualization for a willingness-to-pay study on menstrual hygiene products in rural Bangladesh.

Consultant (Data Specialist) — BURO Bangladesh | Apr 2023

Analyzed 5,000+ survey entries from Google Forms and KoboToolbox for a health behavior change study.

KEY PROJECTS

Smart Care Mobile — Kotlin, Jetpack Compose, SQLite, Laravel

Offline-first Android healthcare platform for remote clinics with dynamic forms.

- Dynamic form engine rendering 20+ form types from server configuration — field teams add new surveys without any code changes
- Offline-first sync system handling 50+ database tables, designed for clinics with intermittent connectivity
- Full lifecycle ownership — from requirements gathering with health workers through architecture, development, and field deployment

Funded Academy Pre — Launch Platform — Laravel 12, Vue 3, TypeScript, MySQL

Full-stack analytics and security platform for a pre-launch fintech startup.

- Sole-engineered a pre-launch analytics and security platform — real-time threat detection, visitor analytics, and automated IP blocking across 5 sites
- Staff IP auto-discovery that retroactively cleans historical data — no manual IP whitelisting needed
- Privacy-first visitor tracking using hashed fingerprints instead of cookies or personal data

HR Management System — PHP 8.x, MySQL, PHPUnit

Enterprise HR platform serving 100+ employees across 13 modules.

- 13 modular domains serving 100+ employees with automated leave calculation and multi-step approval workflows
- 84 automated tests achieving 85% code coverage, with Selenium browser testing for critical paths

EARLIER EXPERIENCE

Systems Development Engineer — BDWholeseller, Dhaka | Apr – Sep 2019

Consumer Technology Expert — David Jones, Sydney | Oct 2017 – Jan 2019

SAP Operator — Robi Axiata Ltd., Dhaka | Feb – Jul 2016

EDUCATION

B.Eng. in Mechatronics, Robotics & Automation Engineering — Monash University Malaysia | 2011 – 2016

CERTIFICATIONS

- **Google Data Analytics Professional Certificate** — Google/Coursera, 2025 — SQL, R, Tableau, data visualization
- **Agentic AI and AI Agents for Leaders** — Vanderbilt University/Coursera, 2025 — AI agents, prompt engineering, custom GPT design
- **Software Engineering Specialization** — HKUST/Coursera, 2023 — UML modeling, software design, testing

PUBLICATIONS & RECOGNITION

- "Democratising data insights for improved project monitoring and accountability" — 42nd WEDC International Conference, 2021