Portfolio

ARIEF MUHAMMAD USRY

Fullstack Developer | Informatics Graduate

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SUMMARY

Informatics graduate (GPA 3.76, cum laude) who builds web and mobile applications end to end, from database design to deployment. Delivered two paid client platforms as a freelancer and a meeting room booking system during an internship at PT Pos Indonesia. First author of a machine learning paper presented at IC2IE 2026.

EDUCATION

Bachelor of Informatics *at Telkom University, Bandung* Aug 2022 – Aug 2026

- GPA 3.76/4.00, Cum Laude (yudisium August 2026; graduation ceremony November 2026).
- Thesis: Prediction of ER-LBD Toxicity using ANN Optimized by Grey Wolf Optimizer, presented at IC2IE 2026.
- Coursework: Software Analysis and Design, Software Testing, Database Systems, OOP, Cloud Computing, Machine Learning.

EXPERIENCE

Freelance Fullstack Developer *at Self-employed, Remote* Sep 2025 – Present

- Built and deployed web platforms for paying clients end to end, from requirements and database design to deployment on Vercel.
- **INDETA** (tourism and UMKM platform, solo): built destination, UMKM product, travel package, article and review modules with Laravel, Tailwind CSS and Supabase, plus an admin CMS with full CRUD and image uploads, installable as a PWA. Live at indeta.vercel.app.
- **SUGIH** (company profile for CV. Prioritas Group, team of 2): built a custom admin panel for products, articles and job openings with drag-and-drop product ordering, and an animated public site with GSAP and Alpine.js (Laravel, PostgreSQL on Supabase). Live at sugih.vercel.app.

Fullstack Developer Intern *at PT Pos Indonesia, Corporate Communication Division, Bandung* Jun 2025 – Aug 2025

- Built a Meeting Room Management System covering 10+ meeting rooms at the Cilaki and Banda offices, where each division books through a representative: a Flutter mobile app and a Laravel web app sharing one Supabase database with real-time sync.
- Implemented the full booking flow: availability by time slot, admin approval or rejection with a reason, cancellation, and photo check-in on the day of use.
- Wrote Supabase Edge Functions (Deno) for check-in reminders and storage cleanup, with push notifications via Firebase Cloud Messaging and OneSignal, plus an admin dashboard for room usage by period and division.
- Delivered the Android app in a test-ready state by the end of the internship.

Operating System Lab Assistant *at Informatics Laboratory, Telkom University* Feb 2025 – Jan 2026

- Led lab sessions on process management, memory management, file systems and synchronization using VirtualBox with Ubuntu and Debian/XINU.
- Taught 2–3 lab classes of 30+ students each, as part of a 5–6 person assistant team, and regularly covered sessions for absent assistants.
- Graded student assignments and projects and gave written feedback.

LEADERSHIP & ORGANIZATIONS

Project Manager, AUTENTIK *at Computing Project Course, Telkom University* Sep 2025 – Jan 2026

- Led a team of 8 building a certificate verification platform (Laravel, FastAPI, OCR, ONNX, Gemini), managing the timeline and acting as the main liaison between the team, project supervisor and academic advisor.
- Delivered the completed project with a final grade of A.

Evaluation Team *at PKKMB 2024 Committee, Telkom University* Jun 2024 – Sep 2024

- Designed the Convention Hall floor seating plan for 8,500+ new students from 45 study programs across 2 batches, measuring the hall and allocating space by program and class size.
- Assigned 2 liaison officers to each of the 13 Informatics classes (30+ students each) and managed the Student Fair timetable.

PROJECTS

Blister64, 1:64 Diecast Auction Platform · *Personal project · Solo* 2026

- Built an auction platform for 1:64 diecast collectors (Go, PostgreSQL, React, TypeScript) with an escrow wallet that locks funds on every bid, refunds outbid users, and adds 2 minutes to bids placed in the final 2 minutes to prevent sniping. The wallet uses simulated money.
- Designed each bid as one transaction that locks the auction row, then wallets in a fixed order to avoid deadlocks, with whole-rupiah BIGINT amounts, CHECK constraints and an append-only ledger enforced by a trigger.
- Tested concurrency with Go's race detector and mutation checks (82 Go and 27 frontend tests in CI), and settled ended auctions with a background worker using FOR UPDATE SKIP LOCKED.
- Added Gemini-powered search that turns everyday Indonesian queries into validated filters with keyword fallback, and deployed on AWS EC2 with no open ports (Cloudflare Tunnel) and nightly S3 backups. Live at blister64.ariefusry.me.

Lajur, AI-Assisted Job Application Tracker · *Personal project · Solo* 2026

- Built a job application tracker for Indonesian job seekers (Next.js, TypeScript, Prisma, PostgreSQL on Neon) with a Kanban board, server-side eligibility checks, and H-3/H-1 reminder emails via Vercel Cron and Resend that never send twice.
- Added an AI layer (Groq with Cloudflare Workers AI fallback) that fills forms from job posts into strict JSON schemas.
- Required every extracted field to match a source quote verified on the server, and redacted personal data before any model call. Live at lajur.vercel.app.

Commission Tracker, Order Management for Illustrators · *Personal project · Solo* 2026

- Built a bilingual PWA (Next.js, TypeScript, Supabase) with a drag-and-drop Kanban board, an income and unpaid-balance dashboard, and a private tracking page per client.
- Secured data with row-level security on every table and a single security-definer function for public tracking pages. Live at commission-tracker-one.vercel.app.

RESEARCH

Prediction of ER-LBD Toxicity using ANN Optimized by Grey Wolf Optimizer Sep 2026

First author · Presented at IC2IE 2026 (9th International Conference of Computer & Informatics Engineering)

- Built an ML pipeline on the Tox21 dataset (8,751 compounds, 18.6:1 class imbalance) using Morgan fingerprints and physicochemical descriptors reduced to 500 features via Mutual Information.
- Applied SMOTETomek only inside the training split to prevent data leakage.
- Tuned the ANN architecture with the Grey Wolf Optimizer, cutting false positives by 40% (37 to 22) and raising F1-score from 0.5809 to 0.5946.

SKILLS

- **Web & Mobile:** Laravel, PHP, Go, Next.js, React, TypeScript, JavaScript, Tailwind CSS, Alpine.js, Flutter, Dart, REST API
- **Data & Machine Learning:** Python, TensorFlow/Keras, Scikit-learn, Pandas, NumPy, RDKit, imbalanced-learn
- **Database & Infrastructure:** PostgreSQL, MySQL, Supabase, Firebase, Docker, AWS (EC2, S3), Vercel, Git/GitHub, GitHub Actions, Linux
- **Languages:** Bahasa Indonesia (Native), English (Professional; EPrT score 540, Telkom University, Mar 2026)