

HILAL MUHAMAD ABDUL GANI

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SUMMARY

Final-year Informatics Engineering student with strong proficiency in full-stack web and mobile development. Experienced in building responsive applications using Flutter, React.js, Laravel, Node.js, and Express.js. Proven track record building RESTful APIs, secure authentication systems, and OLAP-based data warehouse architecture including a distributed backend system with load balancing and database replication built for a food-distribution program. Currently applying these skills as a Mobile Developer Intern, translating product requirements into responsive, production-ready Flutter features.

WORK EXPERIENCE

BLSDM Komdigi Bandung

March 2026 - June 2026

Information Technology Support Intern

- Conducted a systematic wireless site survey, including initial speed testing, channel scanning, interference analysis, and channel switching to diagnose and resolve Access Point handoff delays caused by co-channel interference, thereby reducing latency from ~140 ms to a stable 17-19 ms and increasing throughput to over 150 Mbps with 0% packet loss.
- Designed and implemented a hierarchical office network topology to support the addition of scalable access switches per floor, enabling planned network expansion without service disruption.
- Optimized VLAN segmentation and proposed switch configurations through Packet Tracer/GNS3 simulations prior to deployment in a production environment, to minimize configuration errors and reduce risks associated with network rollout.

Maqdis Academy

June 2026 - September 2026

Mobile Developer Intern

- Refactored the app's state management architecture from ad-hoc setState to BLoC with Clean Architecture, eliminating redundant widget rebuilds and delivering smoother screen transitions while improving production stability.
- Sliced UI for the Hafalan (Quran memorization) screen from Figma design and implemented background audio playback, allowing recitation audio to continue running when the app is minimized or the device is locked.
- Integrated a multi-layer authentication flow (Google OAuth Sign-In, deep linking, multi-tier session persistence) with comprehensive error boundaries and fallback states, reducing failure points across onboarding and login.
- Built modular, responsive UI components from high-fidelity Figma designs, ensuring consistent visual output across varying screen densities and device sizes.
- Implemented API error-handling/interceptor patterns and local caching (Sqflite, SharedPreferences), keeping the app functional and resilient under poor-network or offline conditions.

I Channel TV Bandung

April 2022 - June 2022

Assistant Producer Intern

- Managed daily television production workflows alongside the Senior Producer, focusing on structured scheduling and strict adherence to broadcasting quality standards.
- Coordinated cross-functional communication between the creative, technical, and talent teams, ensuring the seamless execution of project timelines.

PROJECTS

Tracer Study Data Warehouse & OLAP Analytics System

Fullstack Developer

https://github.com/hilalmuhamad/tugas_akhir.git

- Architected a Hybrid Transactional/Analytical Processing (HTAP) environment using PostgreSQL and Laravel, successfully isolating real-time operational data (OLTP) from the analytical data warehouse to ensure zero performance degradation during complex aggregations.
- Designed and implemented a Star Schema Data Warehouse comprising centralized fact tables and conformed dimensions, integrated via an automated ETL (Extract, Transform, Load) pipeline that maintained 100% relational integrity with zero orphan records.
- Engineered robust OLAP functionalities (Roll-up, Slice, Dice, Drill-down) using advanced SQL queries and FILTER clauses, enabling dynamic, multi-dimensional analysis of alumni employability metrics (e.g., vertical/horizontal alignment, waiting periods) for institutional KPI dashboards.

- Optimized database scalability and query performance through strategic schema separation (public, staging, dwh), table partitioning by cohort year, and the implementation of Block Range Indexes (BRIN) on temporal dimensions.

Focus Talk - Android-Based Smart Intervention & Micro-Learning

Nov 2025 - Feb 2026

Mobile Developer

https://github.com/rdwnsyh/focustalk_app.git

- Built a full-stack Android intervention system using Flutter (client) and FastAPI/Python (backend), designed to reduce digital procrastination among students through real-time behavioral intervention.
- Engineered a Heuristic Rule-Based detection engine using Android's UsageStatsManager to monitor foreground app activity in real time and accurately classify distraction-triggering applications (e.g., Instagram, TikTok).
- Developed a Background Service leveraging System Alert Window (WindowManager) to overlay non-blocking English micro-learning quizzes, requiring quiz completion as a soft-gate before accessing distraction apps.
- Designed a FastAPI backend to synchronize user scores, profiles, and a leaderboard system, adding a gamification layer that incentivizes consistent engagement with the learning content.

MediTech - Integrated Digital Health Management System

Jun 2025 - Aug 2025

Fullstack Developer

<https://github.com/hilalmuhamad/app-klinik-kita.git>

- Developed the back-end architecture using Node.js and Express.js (Mongo DB), focusing on secure medical data management and real-time telemedicine capabilities.
- Built a multi-platform ecosystem featuring a React.js web dashboard for hospital administration and a Flutter mobile application for seamless patient access.
- Secured sensitive healthcare information by integrating JSON Web Tokens (JWT) for authentication and Role-Based Access Control (RBAC).

Maggot Cycle - Distributed Backend for Organic Waste Reporting System

Jan 2026

Backend/Infra Engineer

- Architected a distributed microservices backend using Golang (Fiber) and Podman containerization, implementing horizontal scaling with dual backend instances behind an Nginx Load Balancer to handle high-concurrency reporting traffic from hundreds of B2B partner kitchens under a national food-distribution program.
- Designed a PostgreSQL Master-Slave replication architecture and disaster recovery strategy, achieving near-zero data loss (RPO) and sub-1-hour recovery time (RTO), validated through concurrent load testing that maintained a 0% error rate.
- Implemented multi-layer security hardening JWT-based API authentication, Cloudflare WAF, Suricata IDS/IPS, Fail2Ban, and Tailscale VPN for private server access -- verified through Nmap-based penetration testing confirming zero exposed internal ports.

EDUCATION

Universitas Logistik dan Bisnis Internasional (ULBI)

Diploma (D3) in Informatics Engineering | GPA: 3.72/4.00

Bandung, Indonesia | 2023 - 2026

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Programming (OOP), Web & Mobile Development, Database Management Systems (SQL/NoSQL), Software Engineering.
- Final Project: Designed and developed an Alumni Tracer Study & Job-Matching web application using OLAP-based analytics (star schema data warehouse) with a React.js/TailAdmin frontend and Laravel/MySQL backend, enabling institutional monitoring of alumni employment alignment and career trajectories.
- Community Service (PKM): Facilitated a comprehensive Laravel web programming bootcamp at SMK Negeri 2 Cimahi, mentoring students in building functional web applications and serving as the primary Public Relations liaison.

TRAININGS AND CERTIFICATIONS

BNSP

Sep 2026

Teknisi Muda Jaringan Komputer

SAP

July 2025

Introduction to the ABAP Workbench

Dicoding

Sep 2024

Back-End Development with JavaScript

Dicoding

June 2024

Cloud Practitioner Essentials

ORGANIZATIONAL EXPERIENCE

Industrial Visit Committee | PT Computrade Teknologi Internasional

Aug 2025

Project Officer

- Directed a committee of 24 members to organize a strategic industrial visit, serving as the primary liaison between the university and corporate representatives.
- Managed the event timeline, logistics, and correspondence, ensuring a seamless experience for 76 student participants.

HIMATIF (Informatics Engineering Student Association)

March 2025 - Present

Staff Public Relations

- Initiated and managed the "Safari Himpunan" (Comparative Study programs) with external university student associations.
- Acted as the primary liaison between the student association and corporate sponsors, actively managing professional communications and negotiating strategic partnerships to support student-led events.
- Delivered an internal training session on sponsorship prospecting strategies to 10-30 HIMATIF committee members, sharing practical frameworks for identifying and approaching potential corporate sponsors for student-led events.

K-Radio ULBI

March 2025 - Present

Head of Media Design Division

- Led a creative team in producing digital content, resulting in a consistent visual identity across all social media platforms.
- Oversaw the design workflow for campus event promotions, increasing audience engagement through visually compelling graphics.

LANGUAGES & SKILLS

- **Mobile & Frontend:** Flutter, BLoC, Clean Architecture, React.js
- **Backend & Programming:** JavaScript, PHP, Python, Node.js/Express, Laravel, SQL
- **Databases:** MySQL, PostgreSQL, MongoDB, SQLite
- **Tools:** Git, Postman, VS Code, Figma
- **Networking & Infrastructure:** TCP/IP, VLAN Segmentation, Load Balancing, System Hardening, WAF (Cloudflare), Nginx, Tailscale
- **Containerization:** Podman
- **Soft Skills:** Strategic Communication, Cross-Functional Leadership
- **Languages:** Indonesian (Native), English (Professional Working Proficiency)