

ARDHIAN CALWA NUGRAHA

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SUMMARY

Sixth-semester Informatics student with solid backend development experience and strong interest in TestOps, DevOps, and AI Automation. During my internship, I built an AI-powered backend for breast cancer classification and led a cross-functional team to deliver the project on time with high quality. As Backend Mentor at university lab, I taught JavaScript from fundamentals to deployment. Passionate about bringing my technical and leadership skills to XLSMART as a QA Automation Engineer, ensuring reliable systems through Customer at Heart and Act Like Owners values to support “Bersama, Melaju Tanpa Batas”.

SKILLS

Technical Skills

JavaScript, TypeScript, Python, Java, PHP, Node.js, Express.js, NestJS, Laravel, Spring Boot, Django, MySQL, PostgreSQL, MongoDB, Katalon, Postman, API Testing, Git, Docker, Vercel, Railway, VPS, Jira, Trello

Soft Skills

Team Leadership, Cross-functional Collaboration, Mentoring, Problem Solving, Analytical Thinking, Effective Communication, Adaptability, Ownership.

EDUCATION

Telkom University | S1 Informatics | GPA: 3.63/4.00

Sept 2023 - Present

Area of Interest: Backend Engineer, TestOps, DevSecOps, AI Automation

EXPERIENCE

Backend Developer | HUMIC Engineering Research Center

Sept 2025 - Nov 2025

- Architected a high-efficiency backend using Supabase and integrated Python AI model for breast cancer classification, ensuring robust data validation and security (RLS + JWT) that achieved zero reported vulnerabilities and 100% data consistency during real-time inference.
- Engineered AI-model integration pipeline with optimized PostgreSQL schema and OpenAPI/Swagger documentation, reducing average prediction latency to ≤ 150 ms and improving system throughput by 20% while enabling reliable API testing.
- Designed and implemented strict schema validation + authentication (NestJS), reducing potential injection attacks by 95% and accelerating team onboarding time by 40% through standardized CI/CD practices.

Backend Mentor | EISD Laboratory

Mar 2025 – Oct 2025

- Designed and delivered backend curriculum (REST APIs, databases, authentication, CI/CD) for 20+ students across 10 sessions, achieving 95% module completion and reducing student preparation time by 30% through hands-on assignments and example repositories.
- Conducted code reviews and supervised final projects for 3 repositories, resolving 10 priority issues and cutting average debugging time from 3h to 2.5h, demonstrating strong focus on code quality and early bug detection.
- Established Git workflow and review checklist that reduced merge conflicts by 60% and shortened PR review lead time from 7 days to 3 days, promoting better collaboration and consistent quality standards.

Laboratory Research Assistant Coordinator | Motion Laboratory

Sept 2025 - Present

- Directed operational workflow for 40 personnel (21 Laboratory Assistants & Research Members), ensuring optimal resource allocation and maintaining 95% adherence to project milestones with no significant delays.
- Orchestrated Agile-based monitoring across multiple research initiatives, facilitating timely delivery and high-quality output in a cross-functional environment.

Laboratory Research Assistant | Motion Laboratory

Sept 2024 – July 2025

- Developed and maintained Flutter mobile application from concept to MVP, performed component refactoring and UI fixes that reduced page load time by 35% (3.7s → 2.4s) and improved Lighthouse score by +10.
 - Authored technical documentation and setup guides that cut onboarding time for new assistants by 40% and reduced duplicated work.
 - Designed experiment plans and evaluation instruments for usability/UX testing, successfully conducting a pilot study with 2 participants.
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SELECTED PROJECTS

Paja Barbershop Reservation System | <https://pajabarbershop.com>

- Engineered reservation scheduling algorithm using Node.js (Express) and MySQL to ensure zero booking overlaps, delivering conflict-free customer experience.
- Architected feature-based codebase and documented all REST endpoints using Postman collections, significantly improving code maintainability and API testing efficiency
- Managed production deployment on cPanel/Linux, ensuring optimal uptime and stable system performance.

Jualin – Student Marketplace Platform | <https://github.com/Jualin-App>

- Led cross-functional team as Project Manager & Backend Developer to build full-stack platform using Laravel (Backend) + Next.js (Frontend).
- Orchestrated backend deployment on Microsoft Azure, ensuring high availability and scalability for production environment.
- Integrated third-party services (Midtrans payment gateway & Firebase chat), maintaining secure and reliable data flow.

ARSIPEL Project – Inventory Management API | <https://api.arsipel.online/api/documentation.json>

- Designed modular REST APIs with robust form validation, standardized error handling, and OpenAPI/Postman documentation for auth, users, and inventory modules.
- Implemented secure access control (Sanctum → Passport migration + RBAC) and database transactions to prevent race conditions and ensure data integrity.

Tel-Or Backend System | <https://github.com/mhndlkpnr/Tel-Or-BE.git>

- Designed layered Controller-Service-Repository architecture using OOP principles and Spring Boot to create maintainable REST APIs with Bean Validation.
- Implemented unit and integration tests (JUnit 5 + MockMvc) for critical authentication and CRUD flows, ensuring high code reliability.
- Applied Spring Security + JWT for role-based access control and protected sensitive endpoints; project awarded grade A.

VokaLearn (Moodle-based Learning Platform) | <https://vokalearn-lms.web.id>

- Handling backend and DevOps for Moodle LMS, utilizing Docker for containerization and VPS for production deployment to ensure scalable and reliable learning environment.
 - Managed Moodle backend configuration, plugin integration, and server infrastructure, focusing on system stability and smooth user experience for educational platform.
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