

# Akbar Johan Firdaus, S.Kom.

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Software Engineer with hands-on experience developing ERP, POS, construction logistics, and AI-assisted customer engagement systems. At PT. Qinar Raya Mandiri, translates operational needs into web applications for project cost planning, material tracking, approval workflows, sales, and reporting. Works across backend and frontend development using Laravel, CodeIgniter, TypeScript/Node.js, React/Next.js, and MySQL/PostgreSQL. Combines a foundation in machine learning with practical software engineering to build reliable integrations, improve data integrity, and automate repetitive processes for internal teams and clients.

## EDUCATION

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**Udayana University**

2021 - 2025

*Bachelor of Information Technology (S.Kom.) - GPA 3.67 / 4.00*

- **Relevant Coursework:** Machine Learning, Deep Learning, Artificial Intelligence, Web Programming, Mobile Programming, Database (SQL & NoSQL), Computer Vision, Network Security, Software Testing.
- **Thesis Project: Real-Time Road Pothole Segmentation Web Application**
  - Engineered a real-time web application using python streamlit integrating the YOLOv8n-Seg model to automatically detect and segment road infrastructure damage.
  - Trained the computer vision model utilizing a combined dataset from Roboflow, achieving competitive performance metrics of 90.90% precision, 82.20% recall, and 90.10% mAP50.

## WORK EXPERIENCE

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**PT. Qinar Raya Mandiri**

Feb 2026 - Present

*Fullstack Web Developer*

- **Saraswati AI Agent | WhatsApp Agent Support**

Developed a TypeScript/Fastify WhatsApp assistant integrated with the official Meta WhatsApp Cloud API and OpenAI, leveraging a curated knowledge base to resolve customer inquiries, qualify leads, automate follow-ups, and escalate complex issues to staff. Built a Next.js and Supabase dashboard for conversation monitoring, lead tracking, knowledge management, and analytics.

- **Q-Tech | Internal Enterprise Resource Planning System**

Extended a CodeIgniter 3/MySQL ERP for project cost plans (RBP) and contract addenda across Bali and Jakarta. Improved regional data handling, multi-role approval workflows, and Ajax/DataTables views for funding, materials, and project progress.

- **Interdom | Construction Material & Logistics Management System**

Built Laravel 10/MySQL workflows for material requests and physical progress tracking, including multi-level approvals, role-based access, PDF reports, and Telegram alerts. Integrated Q-Tech material data and server-side DataTables for operational monitoring.

- **Store SKM | POS & Office Operations**

Improved a CodeIgniter 3/MySQL system covering sales, purchasing, inventory, credit, and accounting. Connected purchase orders, deliveries, and invoices while strengthening stock audit trails, receivables, customer credit reviews, and financial reporting.

## INTERNSHIP EXPERIENCE

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Rumah Sakit Umum Pusat Prof. dr. I.G.N.G. Ngoerah

Nov 2025 - Feb 2026

*Software Engineer*

- **Research Ethics Committee Management System (SIM-KEP):**
  - Engineered a rigorous state-machine workflow for research proposal reviews (Exempted, Expedited, Full-board) using CodeIgniter 3 (PHP) and MySQL, ensuring strict data integrity and compliance.
  - Developed a responsive and user-friendly interface using Bootstrap (SB Admin 2), jQuery, and Custom CSS to handle complex form validations and role-based dashboards for Researchers and Reviewers.
  - Implemented secure document handling and certificate generation logic within a monolithic architecture optimized for stability.
- **Standard Operating Procedure Management System (SIM-SOP):**
  - Architected a modern, scalable digital archiving system using Laravel 12 and Filament V3 (Admin Panel) to manage the full lifecycle of hospital SOPs.
  - Integrated Google Gemini 2.5 Flash API to power an AI-driven feature that automatically analyzes and generates context-aware summaries of uploaded SOP documents.
  - Built high-performance, reactive frontend components using Livewire 3 and Alpine.js, styled with Tailwind CSS for a seamless user experience.
  - Designed the database schema on MySQL 8.0+ to support high-volume document storage with automated expiration and validity tracking.

PT. Dicoding Indonesia - Bangkit Academy led by Google

Feb 2024 - Jul 2024

*Cloud Computing*

- Architected a scalable RESTful API for a "Tomato Disease Detection" application using Node.js (Express), ensuring low-latency response times for mobile clients.
- Deployed containerized microservices on Google Cloud Run (serverless), enabling auto-scaling capabilities to handle fluctuating user traffic efficiently.
- Implemented secure data pipelines using Cloud Storage for image dataset handling and integrated Firestore for real-time metadata synchronization.
- Established CI/CD pipelines using Google Cloud Build to automate testing and deployment.

## SKILLS

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Technical Skills

- **Languages:** JavaScript, Python, PHP, SQL/NoSQL, HTML/CSS.
- **Frontend Development:** Next.js, React.js, Tailwind CSS.
- **Backend Development:** Node.js, Express.js, Laravel, Code Igniter 3, NestJS, Fastify.
- **Databases:** PostgreSQL, MySQL, MongoDB, SQLite, NeonDB.
- **Cloud & BaaS:** Supabase, Firebase.
- **Tools & DevOps:** Docker, Git (GitHub/GitLab), ORM (Prisma/Eloquent).

Personal

- Discipline, Time Management, Teamwork, Detail Oriented, Problem Solving

Languages

- Indonesian, English