

MUHAMMAD ILHAM MAULANA

Full-Stack Software Engineer • Next.js 16 • TypeScript • Laravel • PostgreSQL RLS

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PROFESSIONAL SUMMARY

Full-Stack Software Engineer with proven expertise architecting multi-tenant SaaS products, high-throughput financial engines, and resilient web platforms. Specializes in **Next.js 16 (App Router, Server Actions)**, **React 19**, **TypeScript**, **Laravel 11/13**, and **PostgreSQL with Row Level Security (RLS)**. Demonstrated track record building deterministic Indonesian NLP transaction parsers, double-entry bookkeeping cores, zero-trust database functions, and end-to-end testing pipelines (Vitest, Playwright, PHPUnit). Experienced in translating complex business logic into performant, secure, and user-centric software.

TECHNICAL SKILLS

Languages:	TypeScript, JavaScript (ES6+), PHP 8.3+, SQL (PostgreSQL), HTML5, CSS3
Frontend & UI:	Next.js 16 (App Router), React 19, Tailwind CSS v4, shadcn/ui, Radix UI, Responsive Design, Recharts
Backend & DB:	Laravel 11/13, Node.js, PostgreSQL, Supabase (Auth, RLS, Storage), SQLite, RESTful APIs, Zero-Trust RPCs
Architecture:	Multi-Tenant Systems, Double-Entry Bookkeeping, Deterministic NLP Parsing, Webhooks, Event Streams
Testing & Tools:	Vitest (Unit/Integration), Playwright (E2E), PHPUnit, Git, GitHub Actions, Vercel, Cloudflare, ExcelJS, Sharp

FEATURED ENGINEERING PROJECTS

PawonHPP — Multi-Tenant Culinary Costing & Subscription SaaS Next.js 16, TypeScript, Supabase RLS, SheetJS, Playwright

Live Demo: pawon-hpp-oxid-labs.vercel.app

- Engineered a full-stack SaaS enabling F&B merchants to calculate exact raw ingredient unit costs, yield waste factors, and channel-specific profit margins (GoFood, GrabFood, Dine-in) with real-time reactive Bento UI and offline autosave drafts.
- Architected a multi-tenant PostgreSQL schema with Row Level Security (RLS) and SECURITY DEFINER RPCs to record immutable cost snapshots and enforce cryptographic data isolation across workspaces.
- Implemented end-to-end subscription lifecycle with private storage proof validation via sharp, 60s signed URLs, and deterministic batch pagination for high-volume Excel (.xlsx) and PDF report exports.
- Maintained 100% quality gate compliance across 130+ automated tests (Vitest) and multi-role browser test workflows (Playwright).

Oxid Ledger — Conversation-First Double-Entry Accounting Engine Next.js 16, TypeScript, PostgreSQL, ExcelJS, Recharts, Telegram API

Live Demo: oxid-wa-ledger.vercel.app | GitHub: github.com/ilhammu29/oxid-wa-ledger

- Architected an in-memory, deterministic regex NLP parser decoding Indonesian conversational transaction entries (e.g., "Kejual 30kg", "Batal terakhir") with sub-millisecond execution and zero external LLM API cost or latency.
- Implemented an accounting core generating balanced debit/credit journals, Chart of Accounts, General Ledger, and trial balances with reversing-pair entries to eliminate double-reversal reporting errors.
- Engineered an automated 14-sheet financial statement workbook exporter using ExcelJS alongside real-time cash flow analytics in Recharts and bidirectional webhook interfaces for Telegram Bot and Google Sheets sync.

OXID Labs — Agency Digital Platform & Web Architecture

Laravel 11/13, PHP 8.3+, Tailwind CSS v4, Vite 8, Cloudflare, PHPUnit

Website: oxidlabs.my.id | GitHub: github.com/ilhammu29/oxid-labs

- Built the official agency platform featuring asynchronous AJAX project modals (/api/projects/{slug}), dark/light theme switching, and a secure administrative console with strict role-based access control.
- Engineered an anti-spam submission pipeline combining hidden honeypot bot traps, IP throttling (RateLimiter), and Cloudflare TrustProxies validation; built self-healing storage serving (servePublicStorage) to bypass hosting symlink blocks.
- Authored feature and security test suites in PHPUnit, verifying authentication boundaries, endpoint sanitization, and administrative mutations.

WORK EXPERIENCE

Founder & Lead Software Engineer

Jan 2024 – Present | Sambas, Indonesia

OXID Group (OXID Labs & OXID Studio) — Software & Digital Agency

- Founded a software studio delivering bespoke web applications, cloud architectures, and digital product solutions for SMEs.
- Led architecture, full-stack engineering, and CI/CD pipelines for proprietary SaaS initiatives (PawonHPP, Oxid Ledger).

Full-Stack Web Developer

Aug 2024 – Jun 2025 | Sambas, Indonesia

Lunggitech — Technology & Web Solutions

- Engineered scalable client web applications across frontend UI, RESTful APIs, and database migrations.
- Managed Linux server deployments, SSL configurations, scheduled database backups, and optimized query performance.

Frontend Developer Intern

Aug 2023 – Nov 2023 | Pontianak, Indonesia

Idekite Indonesia — Software House

- Translated Figma UI/UX mockups into clean, responsive, and cross-browser landing pages with high visual fidelity.

Field Network Technician Intern

Sep 2019 – Dec 2019 | Sambas, Indonesia

PT Telkom Indonesia (Sambas Branch) — Telecommunications

- Assisted with fiber optic deployment, on-site network diagnostics, and customer premises equipment (ONT) setup.

EDUCATION

State Polytechnic of Sambas (Politeknik Negeri Sambas) — Associate Degree in Informatics Management (A.Md.Kom)

2021 – 2024

SMK Subur Insani — Vocational High School Diploma in Software Engineering (RPL)

2019 – 2021