

# Indra Lukmana

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Ten years of experience in building web and mobile applications full-stack. My core stacks are in JavaScript-TypeScript with React, and Next.js on the front-end and NestJS, Express, MongoDB, and PostgreSQL on the backend. I have led front-end architecture and development, managed teams, and shipped features from discovery through deployment. I have integrated AI into production apps, picked up new technologies quickly when the product calls for it, and built platforms that operate under tight regulatory constraints, including a national system serving 50,000+ institutions. I am comfortable working across time zones, balancing async deep work with real-time collaboration when it's needed.

## Skills

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**Languages:** TypeScript, JavaScript (ES6+), Python, PHP

**Frontend:** React, Next.js, React Native, Redux (Toolkit, Saga, Thunk), Jotai, React Query (TanStack), React Hook Form, Tailwind CSS, Chakra UI, Radix UI, DaisyUI, Vite.js, dndkit, React Spring, Chart.js

**Backend:** Express.js, NestJS, Laravel/Lumen, REST APIs, GraphQL, WebSocket (Socket.IO)

**Databases:** PostgreSQL, MySQL, SQLite, MongoDB, Redis, AWS S3

**DevOps & Cloud:** Docker, AWS, Firebase, Supabase, CI/CD pipelines

**Static Analysis:** Husky, lint-staged, Lefthook, ESLint, Prettier, Oxcint, Oxfmt

**Testing:** Jest, Vitest, React Testing Library, Cypress, Playwright, Storybook

**App Optimizations:** Bundle analysis, Lazy loading, Compression techniques, App profiling

**Monitoring & Analytics:** Sentry, Grafana, PostHog

**AI & Integrations:** Agent harnesses (Claude Code, Codex, Pi, OpenCode), OpenAI API, Anthropic API, OpenRouter, agentic workflows, RAG pipelines, local LLMs (Qwen, Gemma via Ollama and VLLM)

**Payment & Billing:** Stripe, Xendit, Chargebee, Paddle

**Tools & Platforms:** Git, Android Studio, Google Play Store, Apple App Store, Electron.js, Tauri, WordPress

## Experience

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**Independent Software Consultant**, Freelance, Remote

Oct 2015 to Present

- Built web solutions across e-commerce, SaaS, performance reviews, online exams, learning management, warehouse inventories, pharmaceutical systems, and AI features.
- Built AI agent-powered features into production applications: LLM-based chatbots with context-aware responses, generative image tools, and autonomous multi-step workflows via the OpenAI API.
- Integrated payment gateways (Stripe, Xendit) and subscription platforms (Chargebee, Paddle) handling checkout flows, recurring billing, transaction management, VAT, and localized tax logic.
- Built and consumed REST and GraphQL APIs. Wrote OpenAPI specs, set up Swagger UI docs, and generated typed TypeScript client SDKs to cut integration bugs.
- Set up PostHog event tracking, funnel analysis, session replays, and A/B tests using feature flags across multiple client projects.
- Built internal AI tools: document processing, template generation, RAG-style knowledge base Q&A, and office workflow automation. Used hybrid local/cloud LLM architecture for data sovereignty in healthcare and finance.
- Built multi-step AI agent pipelines (research, draft, review, format) using OpenAI function calling with retry logic and human-in-the-loop escalation.
- Implemented Redis caching layers for high-traffic endpoints, WebSocket session management, and BullMQ job queues for async processing.
- Migrated projects from Webpack/CRA to Vite, cutting dev server startup from minutes to near-instant.
- Built lightweight desktop clients with Tauri: native file system access, offline capability.

**Lead Frontend Engineer**, IMP Studio, Remote (Indonesia)

Aug 2022 to Jul 2024

- Set up front-end workflows, reusable project templates, and Git branching strategies across multiple products.
- Kept code quality high with TypeScript, Husky, pre-commit hooks, linters, and Prettier, cutting technical debt.
- Built a component library of 40+ documented components with Storybook for visual regression testing.

- Set up a testing strategy across three layers: React Testing Library for component tests, Cypress for E2E across browsers (Chrome, Firefox, Edge), and Storybook for visual isolation.
- Set up automated CI/CD pipelines with Docker for repeatable deployments.
- Reduced image upload sizes from 5-10MB to 1-2MB through client-side compression without quality loss.
- Set up Sentry for error tracking with release correlation. Production bug detection went from days to minutes.
- Led features from discovery through shipping. Mentored 3 engineers on Git workflows, code reviews, documentation, and API design.

**Lead Frontend Engineer**, The API Practice, Remote (Australia) Oct 2020 to Nov 2021

- Added SSR optimizations on Next.js pages, improving initial load performance and user experience.
- Created and maintained a library of 30+ reusable React components documented with Storybook.
- Built a WebSocket-based synchronization system for real-time collaborative editing on a JSON-Schema design tool.
- Built drag-and-drop interfaces using the dndkit library.
- Resolved severe memory leaks from improper Styled Components usage with Tailwind CSS, cutting load times by over 80%.
- Integrated Paddle for subscription billing and recurring payment management across multiple tax jurisdictions.
- Managed the front-end team, ran code reviews, and set code quality standards.

**React Native Engineer**, Homitag, Remote (United States) Jul 2020 to Sep 2020

- Owned the full mobile e-commerce front-end built with React Native, covering product browsing, cart management, and checkout flows.
- Refactored legacy class components to functional components with hooks, improving code maintainability.
- Led a dependency upgrade that cut build times by 30% and reduced production crashes by over 60%.
- Managed release cycles including code signing, store submission, and post-release monitoring.

**Senior Frontend Engineer**, Logique Digital, Indonesia Jun 2019 to Jul 2020

- Led development of a React Native HR mobile app with payroll processing, timesheet tracking, roster management, and background geolocation. Published to Google Play and Apple App Store.
- Built a Next.js web application for archiving scientific papers with search and filtering capabilities.
- Developed a Next.js PWA for an online store with Firebase Cloud Messaging push notifications and offline caching.
- Modernized a legacy Electron.js desktop app: replaced deprecated packages with Fetch API, added JSDoc type safety, restructured prototype code into ES6 classes. Cut load times by 40%.

**WordPress Engineer Intern**, Automattic, Remote (United States) Sep 2018 to Dec 2018

- Investigated and patched WordPress plugin/theme vulnerabilities focused on OWASP Top 10 issues (SQL injection, XSS, CSRF).
- Authored and reviewed pull requests for feature enhancements, performance updates, and bug fixes.
- Analyzed server logs using Grafana dashboards to identify and resolve WordPress errors.

## Projects

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**1. National School Self-Evaluation Platform** E-Government, Education Tech, National Scale  
 Nationwide self-evaluation platform used by over 50,000 schools across Indonesia. Schools assess performance, plan improvements, and report to higher authorities.

- Led the front-end architecture as lead frontend architect.
- Built a multi-tier administrative hierarchy (School Staff, Principal, Supervisor, District, Province, Central) with multi-step approval workflows.
- Developed dynamic questionnaires for school assessments and activity planning features based on results.
- Implemented reporting and data visualization with Chart.js across administrative levels, with year-on-year historical comparisons.
- Configured Sentry for error tracking across the national platform, reducing time-to-resolution for critical bugs.

**Stack:** React, Next.js, Chakra UI, TypeScript, Jotai, React Query, Axios, Zod, React Hook Form, Chart.js, Cypress, Docker, Sentry

## 2. Project Management Platform

E-Government, Internal Tools

Project management web app for a national government ministry handling event planning, participant management, financial reimbursement, and reporting.

- Led front-end development, building role-specific dashboards for administrators, organizers, and participants.
- Created a secure reimbursement workflow with document uploads, validation, and administrative verification.
- Implemented QR code scanning and generation for attendance tracking and document verification.
- Integrated with external financial processing systems.

**Stack:** React, Next.js, Chakra UI, TypeScript, Jotai, React Query, Axios, Zod, React Hook Form, Cypress

## 3. Madrasah Digital Care Chatbot

E-Government, AI & Support, Real-time Communication

AI chatbot and support platform combining automated responses with live-agent handoff for a national government ministry.

- Used OpenAI for automated responses to user queries about educational systems.
- Built a WebSocket system to hand off conversations from AI to human agents.
- Built admin interfaces for ticket tracking, user role management, chatbot customization, and session timeout configuration.
- Designed the architecture to support multiple channels (Web Chat, WhatsApp).

**Stack:** React, Next.js, Chakra UI, Socket.IO, OpenAI API, Jotai, Cypress

## 4. FlowStep

SaaS, API Design, Developer Tools

SaaS platform for teams to collaboratively design REST APIs.

- Led the UI and client-side architecture as lead frontend developer.
- Added WebSocket integrations for real-time collaboration.
- Built a Model Builder for managing data properties, parameters, objects, arrays, and JSON Schemas.
- Generated OpenAPI Specs, JSON objects, and API docs. Set up Swagger UI for API exploration.
- Built a Storybook documentation site covering the full component library.
- Used optimistic UI updates to hide network latency.

**Stack:** React, Next.js, Tailwind CSS, React Query, React Hook Form, .NET Core, WebSockets, NextAuth.js, Jest, React Testing Library, Storybook, Docker

## 5. Web3 Goal Accountability dApp

Web3, Blockchain, dApp

Decentralized goal accountability app on Ethereum. Users create personal goals, set financial stakes, invite community judges, and track milestones.

- Built the frontend to interact with Solidity smart contracts managing goals, stakes, milestones, and judge approvals.
- Integrated RainbowKit for wallet connections and authentication.
- Built interfaces for staking, milestone tracking, and automatic fund release after community approval.

**Stack:** Next.js, TypeScript, Tailwind CSS, DaisyUI, RainbowKit, Wagmi, Viem, Ethereum, Solidity, Hardhat

## 6. School Funding Management Platform

E-Government, Financial Management

Web app for managing and distributing operational assistance funds to schools under a national government ministry.

- Built interfaces for fund allocation, distribution, and verification based on multi-tiered criteria.
- Implemented secure file uploads, validation, and verification flows for financial reporting.
- Built custom paginated tables with React Table to handle large datasets.

**Stack:** React, Next.js, TypeScript, Chakra UI, React Query, Axios, React Table, File-Saver, Date-fns

## 7. KlikHoreca

E-commerce, B2C Food & Grocery

E-commerce platform for food and grocery items: fresh produce and ready-to-eat meals.

- Built product categorization, deep search, shopping cart logic, and multi-step checkout flows.
- Integrated multiple payment gateways and built a frontend points-based loyalty program.
- Used Next.js SSR for SEO optimization on product pages.
- Integrated social login via Facebook and Google OAuth.

**Stack:** React.js, Next.js, SCSS, Laravel/Lumen, MySQL, OAuth, Payment Gateways

## 8. Dokodemo-Kerja

Mobile React Native, HRTech

React Native app for attendance and productivity management with real-time GPS tracking.

- Built GPS geolocation tracking with background task management for continuous location updates.
- Handled the full deployment lifecycle to Google Play and Apple App Store, including code signing, store listing optimization, and managing review rejections.

**Stack:** React Native, Redux, Redux-Saga, React Navigation, Geolocation APIs, Jest, Android Studio, Google Play Store, Apple App Store

## 9. Homitag

Mobile React Native, E-commerce

React Native marketplace for buying and selling items.

- Refactored legacy Redux code, converted class components to hooks, and optimized Redux-Saga implementations.
- Led dependency upgrades that cut build times by 30% and reduced production crashes by over 60%.

**Stack:** React Native, Redux, Redux-Saga, React Navigation, Jest, Android Studio, Google Play Store, Apple App Store

## Education

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**Master of Science, Advanced Design Informatics**, University of Edinburgh, United Kingdom 2016 to 2018  
Computer science, data science, and design thinking. Built AI/data-driven applications with emphasis on Human-Centered Design and user experience.

**Master of Computer Science**, Institut Teknologi Sepuluh Nopember, Indonesia 2012 to 2014  
Data mining algorithms for classification, clustering, association rule mining, and text mining on large datasets.

**Bachelor of Informatics**, Institut Teknologi Sepuluh Nopember, Indonesia 2006 to 2012  
Search engine design and information retrieval, including crawling strategies, indexing algorithms, ranking models, query processing, and relevance evaluation.