

Abdul Fikri

Software Engineer — IT Application Specialist — Database & Enterprise Applications

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Professional Summary

FullStack Software Engineer with 10+ years of experience designing and developing web applications, APIs, databases, and enterprise software solutions for governments, UN agencies, international NGOs, and independent products. Strong hands-on experience with Next.js, React, TypeScript, Tailwind CSS, PostgreSQL, Prisma, FastAPI, and REST APIs, with current focus on building full-stack and AI-powered applications. Experienced across the full software development lifecycle, from system architecture and database design to application development, API integration, testing, deployment, and production support.

Technical Skills

- **Frontend:** React, Next.js, TypeScript, Tailwind CSS, Responsive Web Design
- **Backend & APIs:** FastAPI, Python, Node.js, PHP, Laravel, Django, REST APIs, API Integration, Authentication, JSON
- **Databases & ORM:** PostgreSQL, Prisma, MySQL, Database Design, Data Modeling
- **AI & Automation:** AI Powered Applications, AI/ML API Integration, Workflow Automation
- **Software Engineering:** Software Architecture, System Analysis, Requirements Engineering, SDLC, Application Testing, API Integration
- **DevOps & Tools:** Git, Docker, Linux, Redis

Professional Experience

Software Engineer & Product Developer

Product Development & Consulting

Indonesia

Jun 2026 – Present

- Design and deliver production ready full stack web applications using TypeScript, Next.js, React, FastAPI, PostgreSQL, Prisma, and Tailwind CSS from architecture through deployment.
- Build scalable backend APIs, authentication, and application workflows that improve software maintainability and support secure user facing services.
- Architect relational PostgreSQL databases and Prisma ORM models that ensure data consistency and simplify future feature development.
- Integrate AI powered functionality and workflow automation into web applications, reducing manual processing and enhancing user productivity.
- Provide technical consulting on application architecture, API integration, and database design for software development projects using Next.js and TypeScript.
- Manage the complete software development lifecycle, including requirements analysis, system design, implementation, testing, deployment, and continuous product improvement.

Program Specific Researcher (Database Officer)

Maritime Asian Heritage Survey (MAHS)

Kyoto, Japan

Dec 2024 – Mar 2026

- Managed and maintained structured cultural heritage data in the Arches platform, improving data integrity, consistency, and accessibility for an international research initiative.
- Designed and maintained database schemas that accommodated evolving research requirements while preserving long-term data integrity.
- Implemented validation rules and data quality workflows that improved consistency across heritage records and metadata.
- Developed structured data ingestion, metadata standardization, and extraction workflows that streamlined research data processing.
- Resolved database integrity issues and supported reporting workflows used by researchers and project stakeholders.
- Produced technical documentation that improved knowledge transfer and operational continuity across the project team.

Software Engineering Specialist (Data Systems & Architecture)

BNPB – Indonesian Disaster Resilience Initiative Project

Aug 2023 – Jan 2024

- Contributed to the system architecture and application design of Indonesia's Multi-Hazard Early Warning System, supporting a nationally integrated disaster resilience platform.
- Prepared Software Requirements Specifications (SRS) that provided implementation vendors with clear functional and technical requirements.
- Conducted gap analyses across application workflows, subsystem integration, and operational processes to identify implementation priorities.
- Coordinated technical integration activities between engineering vendors and government stakeholders to support interoperable system delivery.

Software Engineer & Product Developer

Product Development Consultant

Feb 2023 – Oct 2023

- Designed and delivered Fullstack web applications that supported public health monitoring and government budget reporting, enabling more efficient operational reporting workflows.
- Developed frontend interfaces, backend services, and REST APIs using JavaScript, Laravel, and MySQL, improving the usability and reliability of data driven applications.
- Architected relational database schemas that improved data consistency, reporting accuracy, and long-term application maintainability.
- Supported production deployment and system integration with infrastructure engineers, helping ensure stable application rollout and operational reliability.
- Produced technical documentation and performed application testing that improved deployment readiness, knowledge transfer, and ongoing system maintenance.

Software Engineer Consultant

Madani Berkelanjutan

May 2022 – Jan 2023

- Designed software architecture and digital platform solutions that supported multiple digital transformation initiatives across government and development projects.
- Implemented scalable web application infrastructure and platform services, improving the reliability and maintainability of digital systems.
- Translated business and operational requirements into fullstack application solutions that streamlined organizational workflows and supported long term scalability.
- Coordinated technical implementation across multiple projects, ensuring successful integration, delivery alignment, and timely execution of development priorities.

Full Stack Programmer

UNICEF Indonesia

Jun 2021 – Dec 2021

- Developed and enhanced frontend and backend components for national monitoring dashboards used by Indonesian government stakeholders to monitor programs and support reporting and decision-making.
- Integrated REST APIs and government information systems, enabling data exchange and interoperability across multiple digital monitoring platforms.
- Optimized dashboard interfaces and reporting workflows, reducing manual steps and improving usability for program and reporting teams.
- Produced technical documentation, user manuals, and training materials that supported nationwide system deployment and user adoption.
- Investigated and resolved production issues across frontend and backend services, improving system reliability and continuity of operations.
- Supported RapidPro and ONA platforms used for digital data collection, reporting, and operational information management.

Database Management Consultant

Save the Children Indonesia

Jan 2021 – May 2021

- Designed and implemented information management workflows to structure, visualize, and improve access to operational program data.
- Built data processing pipelines supporting mobile data collection and near real-time reporting from field activities.
- Automated operational reporting workflows, reducing manual data preparation and accelerating monitoring of program indicators.
- Standardized data management processes to improve dataset consistency, reliability, and accessibility for operational reporting and analysis.

ICT Associate

UNICEF Indonesia

Dec 2018 – Dec 2020

- Developed digital monitoring and reporting systems with the Immunization Unit for Measles-Rubella (MR) and Oral Polio Vaccine (OPV) vaccination campaigns, enabling centralized tracking of campaign activities and vaccination data.
- Built and maintained database-driven applications and data workflows that supported program monitoring, reporting, and operational decision-making.
- Integrated and managed data across internal information systems, improving the availability and consistency of operational data for program teams.
- Contributed to Enterprise Content Management (ECM) and Multi-Factor Authentication (MFA) implementations, strengthening secure access to organizational information and digital services.
- Automated routine data and reporting tasks and produced technical documentation, reducing manual operational work and improving continuity of system support.

Database System Administrator (RAMS Platform)

International Organization for Migration (IOM)

Apr 2017 – Mar 2018

- Administered the RAMS enterprise database platform supporting migration operations and operational information management, ensuring reliable access to critical program data.
- Managed database integrity, user access controls, and operational workflows to maintain platform reliability, data quality, and secure access.
- Developed enhancements to database and web service components, expanding platform functionality and streamlining data processing workflows.

- Processed and transformed structured datasets using Python (Pandas), preparing data for SQL ingestion and operational reporting pipelines.
- Produced technical documentation and delivered user training, improving platform adoption and enabling more effective operational support.

Software Engineer & Product Developer

Indonesia

Jan 2010 – Dec 2016

- Designed and delivered database driven web applications for monitoring, reporting, and operational information management across multiple client projects.
- Developed backend application logic, database components, and reporting functionality using PHP, CodeIgniter/Laravel, MySQL, and SQL based technologies.
- Designed and implemented data processing and reporting workflows that improved data consistency and enabled more efficient operational analysis.
- Integrated application components and external data sources to support end to end information flows across client systems.
- Coordinated application deployment and infrastructure implementation with technical teams, taking solutions from development through production delivery.

Education

Postgraduate in Entrepreneurship and Innovation
University of Adelaide, Australia

Bachelor of Applied Computer Science
Free University of Bozen-Bolzano, Italy

Languages

English – Professional Proficiency

Awards

Provincia Autonoma Di Bolzano Scholarship – Italy
Australian Development Scholarship – Australian Government