MUHAMMAD ZAKY FATHURAHIM

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Summary

Software Engineer graduate from Telkom University with experience developing end-to-end web and mobile applications using Agile/Scrum, from planning through deployment. Experienced in working both as a team lead and team member, with the ability to adapt to evolving project needs.

Hard Skills

Programming Languages: JavaScript, TypeScript, Dart, PHP, Kotlin, Python, C++, Java, Go.
Frameworks: React.js, Flutter, Laravel, Node.js, Flask, Tailwind CSS, Spring Boot, Gin, Socket.io.
Database & Cache: MySQL, SQLite, MongoDB, Firebase, Redis.
DevOps & Tools: Git, Docker, Jenkins, Grafana, ChatGPT, Antigravity, Hermes.
Microsoft Office: Excel, Word, PowerPoint.

Soft Skills

Problem Solving, Critical Thinking, Leadership, Teamwork, Communication, Adaptability.

Education

Telkom University | Bachelor of Computer Science (S.Si.Kom.) | Informatics — Software Engineering
September 2021 – August 2025

- **GPA:** 3.86 (Cum Laude)
- **Activities and Organizations:** Informatics Laboratory, Research Projects, HIMA RPL.
- **Publication:** An Empirical Study on Lazy Loading Optimization in Reactjs-Based Student Attendance Educational Single Page Applications.

Experience

Lead Software Engineer | DetectMe.id, Telkom University
March 2025 – October 2026

- Led an 8-member Telkom University team in developing the **DetectMe** web and mobile applications under the ULTRALIGHT consortium (KONEKSI Australia–Indonesia Knowledge Partnership Platform).
- Collaborated with ITB on hardware integration and Universitas Padjadjaran on clinical research to deliver a maternal and fetal health monitoring platform.
- Coordinated end-to-end software development, covering planning, design, development, testing, deployment, monitoring, and maintenance.

Full-Stack Developer | PT Telekomunikasi Indonesia
November 2025 – May 2026

- Developed an **OKR (Objectives and Key Results)** system to support goal management and performance tracking for the Antares Eazy unit.
- Built 15+ responsive frontend interfaces and integrated them with APIs.
- Implemented a backend auto-retry mechanism that increased the device pairing success rate from 70% to 90%.
- Conducted research and development on a CCTV event detection system using Vision-Language Models (VLM) and Retrieval-Augmented Generation (RAG).

Full-Stack Developer | Directorate of Information Technology, Telkom University
June 2024 – March 2025

- Developed **SAT-E (Electronic Certificate)**, an application for digital certificate management.
- Implemented backend logic for certificate data management and validation.
- Built 5+ responsive and interactive frontend interfaces and integrated them with APIs.

Back-End Developer | CAATIS, Telkom University
September 2024 – February 2025

- Developed the **PPM** web application by integrating data from SINTA and various other sources of lecturer activity data.

- Designed and implemented APIs to collect, process, and manage lecturer activity data from multiple sources.

Full-Stack Developer | HUMIC Engineering Research Center, Telkom University
February 2024 – June 2024

- Developed the backend and frontend of the **MySkin** web application using a monolithic architecture.
- Implemented a Convolutional Neural Network (CNN) for AI-based melanoma detection from skin images.

Practicum Assistant & Teaching Assistant | Informatics Laboratory, Telkom University
September 2023 – June 2025

- Provided academic and practicum support to 100+ students across six courses, including **Mobile Programming, Operating Systems, Object-Oriented Programming, Database Systems, and Data Structures**, using Flutter, Dart, Java, C++, Xinu, Ubuntu, Firebase, SQL, NoSQL, and REST API integration.

Projects

DetectMe.id | Lead Software Engineer
Stack: React.js, Flutter, Laravel, Node.js, MySQL, Redis, Socket.io, Docker, Jenkins, Grafana, Monolith

- Problem: Remote real-time maternal and fetal health monitoring is required in areas with unstable internet connectivity.
- Solution: Developed an offline-first platform that maintains data collection and automatically synchronizes data when connectivity is restored.

SAT-E (Online Certificate) | Lead Software Engineer
Stack: AngularJS, Laravel, PostgreSQL, Microservices

- Problem: Certificate management was still manual and decentralized, making certificates difficult to manage and verify for authenticity.
- Solution: Developed SAT-E to digitize certificate issuance, centralize management, and provide certificate authenticity verification.

MySkin | Lead Software Engineer
Stack: React.js, Laravel, Flask, MySQL, CNN, Monolith

- Problem: Access to early screening tools for skin cancer (melanoma) is limited.
- Solution: Developed an AI-powered web application using a Convolutional Neural Network (CNN) to analyze skin images and support melanoma screening.

Population Records Application | Full-Stack Developer
Stack: React.js, Tailwind CSS, Laravel, MySQL, Monolith

- Problem: Managing and scaling administrative data for 50,000+ residents of Central Bengkulu was complex.
- Solution: Developed a web application to centralize and simplify administrative data management for Central Bengkulu residents.

AI Truck Detection System | AI Developer
Stack: Python, YOLO (You Only Look Once), Monolith

- Problem: Monitoring heavy vehicles crossing bridges required automated detection and classification.
- Solution: Implemented a computer vision system using YOLO to detect and classify heavy vehicles in real time to support bridge traffic monitoring.

ERP Teng-GO | Full-Stack Developer
Stack: CodeIgniter, MySQL, Monolith

- Problem: Employee timesheet recording and reporting processes were still manual.
- Solution: Developed an ERP module to automate timesheet management.

Certifications

- **TOEFL (2025): 583** — Listening: 51 | Structure: 63 | Reading: 61
- **EPRT (2025): 507** — Listening: 54 | Grammar: 46 | Reading: 52