

## MUHAMMAD ZAKIY ASY-SYAFIQ

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### PROFESSIONAL SUMMARY

Dynamic **LIMS Developer & Laboratory Digitalization Specialist** with **10 years of dual-domain expertise** in laboratory analyst and software development. A pioneer in transforming complex laboratory workflows into automated, **ISO 17025-compliant** LIMS solutions using Laravel and Mendix. Proven leader in bridging the gap between scientific operational needs and enterprise IT, highlighted by a **National Platinum** recognition for improvement methodology and consistent **1st-place achievements as a QCC Leader** in driving high-impact digital transformation projects.

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### EXPERIENCE

#### PT. SANGHIANG PERKASA – KALBE NUTRITIONALS

##### LIMS – Laboratory Digitalization Specialist | JAN 2023 – PRESENT

- **Awarded 1st Place as QCC Leader 2025** for spearheading the full-stack development of **SUMASYS** (Laboratory ERP); successfully **reduced deadstock costs by 334 million IDR** and **boosted operational productivity by 91%**
- **Architected CIELA** (Laboratory e-Logbook via Mendix) to digitize manual documentation and ensure **100% data traceability**; integrated ISO 17025 and ALCOA+ principles into the system logic to eliminate data integrity risks.
- **Analyzed and re-engineered LISA**; **digitized 112 unique manual logbooks** through the **LISA** project by mapping complex workflows into standardized digital functional requirements.
- **Engineered IoT-driven monitoring** and real-time visualization for laboratory incubators and piloted automated data acquisition for pH meters; developed a custom **API pipeline for HPLC data acquisition** for seamless integration into the LIMS environment
- **Designed and implemented "Facilzet,"** an interactive Digital Improvement Dashboard featuring real-time data visualization; **reduced administrative reporting time by 80%**.
- **Developed a lab-centric frontend for analyticalcenter.id**, prioritizing a clean and professional aesthetic that reflects laboratory precision and optimized the interface for technical stakeholders.

##### Laboratory Analyst | MAY 2016 – JAN 2023

- Delivered high-precision microbiological analysis in strict adherence to ISO 17025 standards, maintaining **99%+ accuracy** in pathogen detection and sample preparation.
  - Executed complex inoculation and incubation protocols for key microbial indicators (TPC, Yeast & Mold, Enterobacteriaceae) to ensure high-volume production quality.
  - Mastered end-user reporting within the Laboratory Information System (LIS) while strictly upholding Data Integrity (ALCOA+) principles.
  - Monitored and maintained critical analytical instruments (pH meters, autoclaves, analytical balances) to ensure test validity and daily operational continuity.
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### EDUCATION

#### Pasundan University, Bandung | Graduated July 2025

Bachelor's Degree in Food Technology, GPA: 3.70 / 4.00

- *Note: Successfully completed degree while maintaining a full-time professional career and leading high-impact digitalization projects.*

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## SKILLS

- **LIMS & Digitalization Expertise:** Laboratory Workflow Re-engineering, System Architecture Design, **LIMS Implementation**, Digital Transformation Strategy, **112+ Logbook Digitalization**.
- **Technical Stack: Full-stack Development (PHP Laravel)**, Mendix (Rapid Application Development), **RESTful API Development**, Remote Database Integration (MySQL/SQL Server), VBA Excel Automation.
- **Laboratory & Compliance: ISO 17025 Standards**, Data Integrity (**ALCOA+ Principles**), Laboratory Analysis, Instrument Monitoring & Maintenance.
- **Automation & IoT:** IoT Solutions (**ESP32/Arduino**), Sensor Integration, Real-time Data Visualization (**Facilzet Dashboard**), Automated Data Acquisition.
- **Leadership & Methodology: QCC Project Leadership**, Systematic Improvement (PDCA/GAMP), Strategic Presentation Design, Cross-functional Stakeholder Management.

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**LANGUAGES :** Indonesian (Native), English (Conversational / Professional Working Proficiency)

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## PROFESSIONAL DEVELOPMENT & CERTIFICATIONS

- **Full-Stack Web Development (PHP Laravel) – Sanbercode** | 2022
- **Certified Laboratory Analyst – BSN (National Standardization Agency of Indonesia)** | 2024
- **LIMS Implementation & Principles Training – MK Academy Bogor** | 2026
- **ISO/IEC 17025:2017 Management System & Internal Audit – QA Analytical Center** | 2021
- **Full-Stack Development & API Integration for Developers – Hacktiv8** | 2025
- **Mendix Rapid Application Development – IT Kalbe Nutritionals** | 2025
- **Industrial Internet of Things (IIoT) for Laboratory Automation – Avisha.id** | 2025
- **Computerized System Validation (CSV) – Udemy** | In Progress (Expected Completion: April 2026)
- **CI/CD Deployment Pipeline – IBM** | In Progress (Expected Completion: April 2026)
- **English for IT Professional – OpenEDG** | In Progress (Expected Completion: Mei 2026)

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## HONORS & AWARDS

- **Platinum Award – TKMPN National Event | 2021**  
Recognized at the national level for excellence in systematic improvement methodology and driving digital transformation in laboratory environments.
- **Top-Tier QCC Leader – Kalbe Nutritionals Improvement Event | 2023, 2025**
  1. **2025 (1st Place):** Led the **SUMASYS** project to victory at the corporate level, recognized as the best digitalization initiative in Kalbe Nutritionals
  2. **2023 (2nd Place):** Spearheaded the "**Reducing Sterilization Efficacy Testing Costs**" project in Kalbe Nutritionals
- **Kalbe Nutritionals Impressive Award – 1st Place Achievement Kalbe Nutritionals Network | 2021**
- **Gold Achievement – Individual A3 Improvement Kalbe Nutritionals | 2025**
- **1st Place – Improvement Culture (I2C) Kalbe Nutritionals | 2020**

## Innovation & Digitalization Awards

- **Best Employee for Digitalization Contribution – QA Analytical Center** | 2026
- **The Most Outstanding Innovator – QA Analytical Center** | 2025
- **Best Digitalization Project – Mendix Project Assignment “CIELA (e-Logbook) prototype”** | 2025
- **Certified Improvement Facilitator – QA Analytical Center | 2026**  
Appointed to lead and foster the improvement culture, mentoring teams in systematic problem-solving and digital adoption.