

MOHAMMAD ADITYA LAZUARDI

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Industrial Engineering graduate with strong background in maintenance, reliability, and operations management. Experienced in technical analysis, predictive modeling, simulation through internships in major energy and manufacturing companies. Skilled in working with multidisciplinary teams to solve complex engineering problems, optimize processes, and ensure operational reliability.

EDUCATION

SEPULUH NOPEMBER INSTITUTE OF TECHNOLOGY - Surabaya, East Java Jul 2021 - Aug 2025
Undergraduate Industrial Engineering, 3.33/4.00

- Relevant Course: Manufacturing Systems, Lean Concept, Six Sigma, Supply Chain, Industrial Automation, Maintenance and Reliability Engineering, Operation Research
- Final Thesis: Development of Lean 4.0 Implementation Strategy for Indonesia Automotive Industry

PROFESSIONAL EXPERIENCE

BADAK NGL (Project Based) May 2025 - Present
Reliability Engineer

- Lead 7+ RCM team and developed Reliability-Centered Maintenance (RCM) strategies for over 1000+ pieces of equipment across 10 facilities to enhance asset reliability.
- Identified opportunities for a 6.54% reduction in corrective maintenance costs through rigorous data analysis.

TOYOTA MOTOR MANUFACTURING INDONESIA Aug 2024 - Feb 2025
Operation Management Division

- Designed the digital twin framework to support core Toyota Production System (TPS) principles, enhancing real-time data flow for Just-in-Time (JIT) inventory management and enabling proactive quality control (Jidoka).
- Researched and applied ISO 23247 guidelines for Digital Twin implementation, ensuring adherence to standards for integrated-digital monitoring systems for 3 product assembly line across 6 company. Projected to increase efficiency by 6.01% and reduce downtime by 87.56%, creating a significant competitive advantage through enhanced manufacturing operations.

PETROKIMIA GRESIK Dec 2023 - Feb 2024
Reliability Department

- Enhanced Reliability Maintenance Planning by developing predictive maintenance estimation models and optimized maintenance interval strategies using Monte Carlo simulation methods. This approach was applicable to over 300 pieces of critical equipment, directly supporting the company's transition to a predictive maintenance.

ORGANIZATION EXPERIENCE

MANUFACTURING SYSTEM LABORATORY Jan 2024 - Aug 2025
Assistants Coordinator

- Demonstrated proven leadership capability by coordinating 19 teaching assistants to execute laboratory activities for over 350 students, achieving a 97.8% KPI completeness.
- Managed the end-to-end delivery of 5 practicums, 5 tests, and 1 major project, ensuring high standards and a student satisfaction rating of 4.7/5.0.

INI LHO ITS!! Nov 2022 - Feb 2023
Head of Purwakarta Regional Event

- Led and supervised a team of 15 members to organize a regional outreach event, achieving 100% completeness for all deliverables.
- Successfully coordinated visits to 12 high schools, reaching over 300 students.

TECHNICAL PROJECT

Spare Parts Inventory Planning for Cement Industry 2025
• Demonstrated strong problem-solving skills by designing a new inventory policy to address a Rp. 117 Billion dead-stock issue for a major cement industry client, optimizing maintenance costs.

Lean Implementation on Wonosalam Coffee Association with PT. Toyota 2024
• Applied Lean and continuous improvement principles to a real-world operational challenge, resulting in a 10% productivity increase.
• Using DMAIC Framework for transforming operational workflow to improve product quality. Resulting quality increase by 12%

TECHNICAL PROJECT

Reliability Calculation Web Application	2025
<ul style="list-style-type: none">Proactively identified a team productivity bottleneck and independently developed a web application using CMMS failure data that increased the RCM team's efficiency by 700%, showcasing a fast learner mindset.	
Predictive Maintenance using Python	2025
<ul style="list-style-type: none">Implementing a CatBoost classification and Deep Learning model on a dataset of 10,000+ machine sensor readings. Achieving 60% Model Accuracy improving 30+ improvement from baseline method	
ILOG (Illegal Logging Automatic Detection)	2024
<ul style="list-style-type: none">Lead 5+ members team to create a device that will be used to detect illegal logging in forest area by using RNN machine learning.	
Design of a Closed-House Chicken Coop Monitoring System and Chicken Blood Processing Equipment to Support Chicken Farming Productivity	2024
<ul style="list-style-type: none">Designed an Arduino-based microcontroller system to monitor air quality in a closed house chicken coop. The system employs three types of real time sensors to monitor key air quality parameters: nitrogen (N2), carbon monoxide (CO), and ammonia (NH3).	

CORE COMPETENCE

- Analytical & Problem-Solving:** Data Analysis, Process Optimization, Root Cause Analysis (DMAIC), Predictive Modelling (Python), Monte Carlo Simulation.
- Leadership & Collaboration:** Team Coordination & Management (up to 19 members), Project Planning & Execution, Agile Teamwork, Stakeholder Communication.
- Operations & Supply Chain:** Lean Manufacturing, Supply Chain Principles, Quality Control & Assurance, Manufacturing Systems, Maintenance & Reliability.