

Arsharizka Syahadati Ichwanda

Software and Data Engineer

+62 858 8448 5010 | arsharizka@yahoo.co.id | [linkedin.com/in/arsharizka-syahadati-ichwanda](https://www.linkedin.com/in/arsharizka-syahadati-ichwanda) | github.com/arsharizka

An experienced Software and Data Engineer with over 4 years in IoT-based mobility solutions, data analytics, and system architecture. I am highly experienced in the end-to-end design and software development of smart mobility systems, from hardware integration to cloud-based data processing and reporting dashboards. With hands-on experience in building scalable solutions for logistics, mining, and transportation sectors, I bridge the gap between technical execution and business needs through structured planning, system improvement initiatives, and cross-functional project management. Passionate about designing intelligent systems that optimize operations, enhance utilization, and support strategic innovation. I am passionate about turning complex challenges into actionable strategies and driving innovation through clear communication and effective leadership.

Work Experiences

- Jan 2021 - present

Software and Data Engineer
PT Mito Agung Mobilitas, Jakarta

 - Project development of a Fleet Management and Tracking System to monitor vehicle utilization and logistics operations.
 - Designed and implemented database, API, and algorithm with real-time data pipelines for processing over 1 million GPS records.
 - Generated various operational reports on utilization, trip efficiency, geofence violations, and driving behavior.
 - Participated in designing the system architecture and dashboard analytics (PANTAU platform).
 - Contributed to planning, system design, and data strategy across multiple client projects in logistics and mining.
- Mar 2022 - Oct 2024

Software Engineer (Part-Time)
PT Nirmana Kinetik Rekayasa Indonesia, Jakarta

 - Designed and implemented ERP systems for Vending Machines, Procurement & Inventory, and Engineering Project Management.
 - Consulted with clients to align software development with business workflows and process optimization goals.
- Aug - Nov 2020

Hardware Engineer
PT Delameta Bilano, Jakarta

 - Research about various types of electrical motor for EV and "PALMAT" development.
 - Learned and Implemented about communication protocols using MCU or ECU module.

Education

- 2016 - 2020

Bachelor Degree in Physics
Institut Teknologi Bandung, Indonesia
GPA: 3.43

 - Dean's List, Faculty of Mathematics and Natural Sciences (FMIPA), May 2019.

Project and Research

- 2021 - present

Fleet Management and Tracking System Vehicle (PANTAU)

 - Designed and implemented fleet management platform with real-time monitoring and data analytics.
 - Developed algorithms and data processing for monitoring and reporting in logistics, mining, vehicle trip tracking, and passenger transport.
 - Developed dashboards for data-driven decision-making across operational metrics.
 - Built models for driving behavior scoring (speeding, harsh braking, idling, etc.) for logistics, rental, and public transport.
 - Designed vehicle grading/scoring tools for rental/used car analysis.
 - Integrated fuel monitoring using level sensors and fuel meter sensors.

-
- Route optimization for city routes (Google API) and custom routes (hauling).
 - Developed vehicle utilization metrics using engine and travel status.
 - Analyzed vehicle productivity based on scheduled assignments and ritase tracking.

PT Mito Agung Mobilitas

2022 - Traffic Management Control

Present

- Designed an integration system for Traffic Management Control application with client ERP and GPS Tracking System.
- Performed data analytics and processing for truck (car carrier and dumptruck) utilization monitoring.
- Generated reports on overstop, overspeed, and geofence violations.
- Matched actual route jobs using GPS tracking data and route assignment (completed, incompleted, violation).
- Analyzing legal/illegal points on transportation routes during shipping mining operations.
- Integrated SPK (job order) monitoring with real-time vehicle status in ERP.

PT Mito Agung Mobilitas

2024 – EV Monitoring System

Present

- Designed and developed a tracking and charging system on the electric vehicle (EV).
- Calculated and analyzed battery cycle on EV charging.
- Estimated battery charging time, usage time or distance traveled, and the cost required for full charging.

PT Mito Agung Mobilitas

2024 - Fuel Burn Monitoring and Carbon Emission Analysis

Present

- Fuel burn monitoring using fuel meter sensors in diesel vehicles.
- Analyzed and calculated carbon emissions generated by trucks using diesel fuel.
- Developed a model to estimate CO₂ emissions based on fuel consumption, vehicle type, and operational data.
- Utilized data analytics to recommend emission reduction strategies for fleet management.

PT Mito Agung Mobilitas

2024 - Attendance System

Present

- Designed and developed an attendance system on the vehicle using fingerprints and RFID tags.
- Recognize and take pictures when taking attendance, sent and displayed on the dashboard.
- Developed a system for vehicle assignment by drivers in the operational fleet.

PT Mito Agung Mobilitas

2022 - Scheduled Assignment Monitoring

2024

- Managed fixed-route job orders for dumptruck vehicles in South Sumatra and Central Kalimantan.
- Planned and analyzed scheduled jobs for ships in GSM signal blackout zones (Bali-Lombok).
- Performed data analytics on lead time and cycle time delivery patterns.
- Analyzed overstop events (legal and illegal points) and overroute behavior.
- Integrated vehicle activity with ERP systems.

PT Mito Agung Mobilitas

2022 - Advertising System on Bus (AdsBus)

2023

- Designed and developed hardware – software integrated for Advertising System Module on Bus.
- Created a system and dashboard application for agency and bus owner for monitoring bus or ad serving.

PT Mito Agung Mobilitas

2023 – 2024 ERP Engineering Project Management

- Designed and developed ERP Engineering Project Management system (customized) for internal and B2B Company
- Created planning and business process flow engineering project for the planning, implementation, and post-implementation phases.
- Created a system and dashboard applications for operations, project managers, and finance for monitoring project.

PT Nirmana Kinetik Rekayasa Indonesia

2022 - 2023 ERP Procurement and Inventory Management

- Designed and developed ERP Procurement & Inventory Management system for internal company (Asset Management).
- Created a system and dashboard application for procurement, staff, and operations for monitoring asset.

PT Nirmana Kinetik Rekayasa Indonesia

2022 - 2023 ERP Vending Machine

- Designed and developed ERP Vending Machine System (logistics vending machine).
- Created a system and dashboard application for supplier, buyer, and operations for managing stock or purchasing transactions.
- Integrated payment gateway (Midtrans API) for vending machines.

PT Nirmana Kinetik Rekayasa Indonesia

Aug – Nov 2020 Electric Vehicle Motor Research and Development

- Research on motor types for EV module.
- Developed communication modules using UART, SPI, I2C, and CAN Bus with various MCU/ECUs.

PT Delameta Bilano

2018 – 2020 Research-Based Learning of Network-Based Instrumentation

- Development of RSSI WiFi-Based Indoor Position Tracking System Using Smartphone
- Research and Development of Heart Rate Detection Monitoring IoT System
- Research and Development of Volcano Early Warning System using LoRa
- Research and Development of Fluid Purity Measurement
- Research and Development of Landslide Disaster Warning System

Institut Teknologi Bandung

Areas of Expertise

System Architecture & Planning | ERP System Design & Integration | IoT & GPS Tracking System Integration | Data Analytics & Big Data Processing | Agile Project Management & Scrum | Fleet Management Solutions | Hardware-Software Co-design | Route Optimization & Productivity Analytics | Leadership & Team Management | Business Solution Presentations | Roadmap & Strategic Planning

Computer Skills

Visual Studio Code | Visual Studio 2022 | Git | Microsoft Office (Excel, PowerPoint, Word) | Tableau | Microsoft Power BI | Figma | OpenAI – ChatGPT | PostgreSQL | SQL | MongoDB | .NET Framework, | C# | Python | Google API | Cloud Platforms Azure (Microsoft), Google Cloud Platform (GCP) | Atlassian Software (Jira, Confluence)

Participants

Sept 2024 AWS Summit Jakarta (2024)

AWS (Amazon Web Services)

Sept 2023 Data Science Weekend (DSW) 2023

Data Science Indonesia

Oct 2022 Bring the Power of Open Data for Storytelling (2022)

Diskominfo Jabar

Oct 2022 Product Prioritization Frameworks for Product Manager

Apiary Academy