Dzulfikar Ats Tsauri

Industrial IoT & MES Solution Engineer

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SUMMARY

Solution engineer with 5+ years designing and delivering MES, SCADA and Industrial IoT systems for manufacturers in Singapore and Indonesia. Leads discovery workshops, writes solution blueprints, builds PoCs and demos, and stays through deployment. Integrates PLCs and CNCs (OPC UA, Modbus, FOCAS) with ERP (SAP, Microsoft Dynamics, Epicor) on cloud, edge and on-premises stacks. Hands-on builder: founded Voltrus, industrial software sold in 10+ countries.

EXPERIENCE

Acting Product Lead, OpexMX Nov 2025 – Present

Opex Consulting Group *Remote, Jakarta*

- Lead architecture, roadmap and delivery of OpexMX (mx.opexcg.com), a multi-tenant CMMS: work orders, preventive maintenance, assets, spare parts, MTBF/MTTR reporting and an offline-capable Android field app with NFC/QR.
- Run product demos and solution presentations for prospective enterprise customers and turn their feedback into the roadmap.

Solution Engineer Jul 2025 – Present

Opex Consulting Group *Remote, Jakarta*

- Deliver Siemens Opcenter Execution and Mendix solutions for manufacturers: requirements gathering, configuration, customization and integration; resolved long-standing performance issues and change requests on a Mendix pseudo-MES for Freyabadi Indonesia.
- Build presales PoCs and join product strategy discussions with manufacturing clients.
- Built OpexFlow (flow.opexcg.com), Rust integration middleware in one binary under 60 MB: Modbus, OPC UA, EtherNet/IP, Fanuc FOCAS, MTConnect, MQTT and NATS, with a signed durable queue; runs from a Raspberry Pi to a rack server.

Founder 2025 – Present

PT Joyo Digitama Solusi (Voltrus) *Malang, Indonesia*

- Founded Voltrus (voltrus.id), open-core industrial software: shipped native protocol tools in Rust/Tauri (Modbus, BACnet, DNP3, EtherNet/IP, S7, OPC UA, MQTT), four of them on the Mac App Store; 46 paid licences sold to buyers in 10+ countries since May 2026.
- Built Voltrus SCADA, a self-hosted SCADA in one Rust binary: Modbus TCP, OPC UA, S7, EtherNet/IP, DNP3, BACnet/IP and an embedded MQTT broker, compressed historian, alarms, 2D/3D HMI, OEE, REST API and MCP server; runs on a Raspberry Pi.

MES Deployment Engineer Nov 2023 – Feb 2025

Arcstone Pte. Ltd. *Remote, Singapore*

- Primary technical advisor for MES design and deployment at 3+ Singapore manufacturers, delivered on time and within budget.
- Ran technical discovery workshops and turned operational requirements into edge, cloud and integration architectures, including ERP (SAP, Microsoft Dynamics) and machine (OPC UA, Fanuc FOCAS, Modbus) integration on the arc.ops platform.
- Gave technical demos and workshops to engineering and executive stakeholders that contributed to 3 signed contracts.

IoT Developer Mar 2023 – Jul 2025

Albéa (PT. Techpack Asia) *Semarang, Indonesia*

- Designed and led an Industrial IoT architecture (ESP32, MQTT, Node-RED, Raspberry Pi, Next.js) for real-time monitoring of 200+ machines across sites in Indonesia and China, improving uptime by 30%.
- Built and rolled out eAndon (machine monitoring and downtime ticketing) and eCountboard (hourly production tracking) at four plants in Indonesia and China.
- Managed a $120,000 project budget and cut hardware and infrastructure costs by 25% without losing performance.

Industrial Automation Engineer May 2022 – Dec 2022

PT. Hexa Daya Solusi *South Tangerang, Indonesia*

- Built integration layers between PLCs, MES and cloud systems using MQTT, Modbus TCP, OPC UA and REST APIs.
- Built MQTT and Modbus TCP energy monitoring, and installed and commissioned the IoT nodes feeding centralized dashboards.

Engineering Supervisor Jan 2022 – Mar 2022
PT. Azka Mulia International *Surabaya, Indonesia*

- Supervised a 5-person engineering team; reduced machine downtime by 30% and unplanned outages by 40% with condition-based maintenance, and raised machine capacity by up to 50%.

Maintenance Engineer Jul 2021 – Dec 2021
PT. Azka Mulia International *Surabaya, Indonesia*

PROJECTS

Material Validation SCADA 2023 – 2025
British American Tobacco (3 departments)

- Integrated SAP with a Keyence KV-8000 PLC over Modbus TCP so wrong materials cannot reach the line; material mismatches fell to zero. Deployed on Azure; led daily technical coordination with client stakeholders.

Manufacturing Execution System 2024
Fong's Engineering, Singapore (Arcstone)

- Tailored arc.ops for end-to-end MES, integrating Microsoft Dynamics via REST and CNC machines via OPC UA, Fanuc FOCAS and Modbus.

RFID Traceability 2024
ASM Front-End Manufacturing Singapore (Arcstone)

- Implemented RFID-based traceability integrated with SAP to track material precisely and cut operator errors.

Equipment Maintenance System 2024 – 2025
Lumileds Singapore (Arcstone)

- Tailored the arc.ops maintenance module to track maintenance activities.

SKILLS

Delivery: Solution architecture, Technical pre-sales, PoC development, Requirements workshops, Stakeholder management, Product roadmap
Industrial systems: MES/MOM (Siemens Opcenter, arc.ops), SCADA/HMI, Historian, CMMS, OEE, PLC integration, Node-RED, ESP32, Raspberry Pi, Edge computing
Industrial protocols: OPC UA, Modbus TCP/RTU, MQTT, Siemens S7, EtherNet/IP, DNP3, BACnet/IP, Fanuc FOCAS, MTConnect
Enterprise integration: SAP, Microsoft Dynamics, Epicor Kinetic, REST APIs
Software and cloud: React, Tauri, Hono, Axum, Node.js/Bun, PostgreSQL, SQLite, SQL Server, Cloudflare Workers, AWS, Azure, Mendix, Linux, Git

EDUCATION

Applied Bachelor of Engineering, Automation Engineering Technology 2018 – 2022
Institut Teknologi Sepuluh Nopember *Surabaya, Indonesia*

- GPA 3.51 / 4.00
- Silver Medal, Japan Design, Idea & Innovation Expo (WIIPA), 2021

CERTIFICATIONS

Mendix Rapid Developer 2026
Mendix

AWS Certified Cloud Practitioner 2023
Amazon Web Services

Google IT Automation with Python 2022
Google