



# M Zulfikar Isnaen

SOFTWARE ENGINEER · MES (MANUFACTURING EXECUTION SYSTEM) ENGINEER

No. 16 Karang Sari Street, Kec. Cimahi Selatan, Jawa Barat, Indonesia 40535

☎ (+62) 857-5996-6626 | ✉ isnaen70@gmail.com | 🏠 zulfikarisnaen.com | 📱 zulfikar4568 | 🔗

zulfikar-isnaen-5974121b6

## Summary

Experience in gathering requirements until implementing Manufacturing Execution Systems (MES) Software Development based on ISA-95 standards in Discrete Manufacturing and Batch Manufacturing for 3+ years of experience. I do modeling of the factory, for example (Pyhscal, Process, Execution Modeling). The use case of what I've done such as Material Consumption and Validation, Process/Workflow Enforcement, Task Enforcement, traceability, Maintenance Management, Quality, Dispatching Orders, Data Integration from ERP Systems, and many more. I have a strong technical background in Mechatronics Engineering.

My passion is creating innovation to solve problems helping people to reach their purpose, and learning new technologies and tools if the need arises.

## Work Experience

### Opex Consulting Group

Indonesia - Singapore - Malaysia

SOFTWARE ENGINEER | MES (MANUFACTURING EXECUTION SYSTEM) ENGINEER

Apr. 2021 - Present

- Implement and Deliver Solution for Digital Transformation in Manufacturing 4.0
- Configured System Administration of Windows Server 2019
- Integration of Enterprise Software
- Administration of SQL Database Server
- Setup Observability Tools
- Opcenter Siemens Execution Core / Electronics (Modelling Bussiness Process of Physical, Process, Execution) MES
- Opcenter Siemens Execution Core / Electronics (Configuring Bussiness Logic in Designer, and manage Portal Studio) MES
- Design and Create Custom Application for Manufacturing Process using (.NET and Mendix Siemens)
- Manage Google Cloud Platform
- Knowledge gained: Software Enterprise, Process Control, Aquisition Data, Production Management, Quality, Material Management, Maintenance Management, Data Integration
- Tech Stack: C#, Google Cloud Platform, Opcenter MES Siemens software, Desktop Application .NET, Siemens Mendix, System Administration Windows Server 2019, NLB (Network Load Balancer), IIS 8, Redis, Windows Service .NET, ASP.NET, Prometheus, AlertManager, Grafana, Grafana Loki, Promtail

### Vechr Community

Indonesia

FULL STACK ENGINEER

Jan. 2022 - Jan 2023

- Developing an application IIoT refer to ISA-95
- Developing an Event driven Application Monitoring Machine using Nest/Typescript and Vue/Typescript
- Create Realtime Historian data machine using Web Socket
- Create Audit History app
- Create Drag & Drop Chart (Widget) for Dashboard, and connect with Web socket to achieve Realtime Chart System
- Manage Database Postgresql and Time Series Database (InfluxDB)
- Create Deployment Kubernetes using Helm Chart
- Sending Alert to SMTP
- Knowledge gained: Event Driven Architecture, Microservices Pattern, Usage of Message Broker (NATS, MQTT), Container Orchestration, Manufacturing System, Design Authentication and Authorization, Restfull Pagination
- Tech Stack: Kubernetes & Helm Chart, Terraform, Terragrunt, GCP, Docker, NATS (Messaging System and Caching), MQTT, GIT Hooks, NGINX API Gateway, Node Mailer, Nest, Prisma ORM, State Management(pinia), Vue/Typescript, Husky, Commitizen, linter

### ThreeSixty

Remote

SOFTWARE DEVELOPER (FREELANCE)

Feb. 2022 - Jul. 2022

- Created Frontend Application.
- Doing Integration with Backend Rest API.
- Collaborative using Agile (JIRA).
- Knowledge gained: Vuejs/Typescript, Docker, JWT auth, Stripe

## Synergy Engineering

FULL-STACK DEVELOPER

BSD Tangerang, Indonesia

Jan. 2021 - Apr. 2021

- Developing Application SBS (Synergy Bussines Suite) to create Front End and Backend using Ruby On Rails Framework.
- Collaborate team with Kanban Methodologies using Trello.
- Create API backend Rails with Postgresql.
- Create Drawing tagging for Engineering Drawing.
- Version Control System using Git and Gitlab.
- Knowledge gained: Database Design, Authentication & Authorization, GIT FLOW
- Tech Stack: ruby, rails MVC, Javascript, HTML (.erb)/ Slim, SASS, NPM, GITLAB, Leafletjs, Cancancan, Devise, Dropzonejs, Bootstrap 4.

## L'Oréal (PT Yasulor Indonesia)

SOFTWARE DEVELOPMENT ENGINEER

North Cikarang, West Java,  
Indonesia

Sept. 2019 - Jan. 2020

- Doing Software Development "Inspection Check application using ASP.NET and VB.NET".
- Doing Maintenance & Preventive on Filling Machine.
- Doing Maintenance & Preventive Process Machine SKID.
- Knowledge Gained: VB.net, ASP.net, Desktop Application, Maintenance system.

## PT Datareka Integrasia Teknologi

FREELANCER

Cimahi, West Java, Indonesia

March. 2017 - July. 2017

- Troubleshooting Board PCB of Security Panel
- Assembly Board PCB Controller and Power Supply using SMD Component

## Midea Electronics Indonesia

FIELD SERVICE ENGINEER

North Jakarta, Indonesia

Jun. 2016 - August. 2016

- Maintenance and repair Air Conditioner.

## Tools

<b>Core Languages</b>	Typescript, C#
<b>Environment</b>	Nodejs, .NET
<b>Web Framework</b>	Nestjs, Vue, Vite
<b>Databases</b>	Microsoft SQL Server, PostgreSQL
<b>Infrastructure Tool</b>	Docker, Kubernetes, Helm, Terraform, Terragrunt, Github Action, Lens, Google Cloud Platform
<b>Messaging System and Caching</b>	NATS, Redis
<b>Robotics</b>	C++, Robot Operating System
<b>Low Code Development</b>	Mendix Siemens
<b>Enterprise Industrial</b>	Manufacturing Execution System, Opcenter Core Siemens Software

## Honors & Awards

### DOMESTIC

2020	<b>1th Place</b> , BEST GRADUATION OF POLMAN	Bandung,Indonesia
2019	<b>1th Place</b> , BEST ACADEMIC OF POLMAN	Bandung,Indonesia
2019	<b>4th Place</b> , ROBOT ABU INDONESIA (KRAI)	Bandung,Indonesia
2018	<b>1th Place</b> , BEST ACADEMIC OF POLMAN	Bandung,Indonesia
2016	<b>4th Place</b> , MOBILE ROBOTICS NATIONAL 4th	Malang,Indonesia
2016	<b>1th Place</b> , MOBILE ROBOTICS WEST JAVA	WestJava,Indonesia

## Certificates

2022	<b>Certified Practical DevOps Engineer</b> , Studi DevSecOps
2022	<b>Docker &amp; Kubernetes: The Practical Guide</b> , Udemy
2022	<b>The Nest JS Bootcamp - Complete Developer Guide</b> , Udemy
2021	<b>Rapid - Mendix Developer Certification</b> , Mendix
2021	<b>React Js Web Frontend</b> , SanberCode

## Education

## Bandung Polytechnic for Manufacturing (Polman)

Bandung, Indonesia

ASSOCIATE'S DEGREE IN MECHATRONICS ENGINEERING 3,60 OF 4,00

2017 - 2020

- Final project for "Implementation Navigation System using ROS (Robot Operating System) for Autonomous Mobile Robot (AMR)"
- Other project "Implementation interpolation CNC 2.5D using Algorithm Digital Differential Analyzer (DDA)"

## Vocational High School - SMKN 1 Cimahi

Cimahi, Indonesia

ASSOCIATE'S OF INDUSTRIAL ELECTRONICS

2013 - 2017

- Final project for "How to Work of System Air Conditioner Type MSF09CRN"

## Projects

---

Freyabadi **Pseudo Manufacturing Execution System**, Jan, 2024 - Present

Karawang, Indonesia

PCI **Manufacturing Execution System**, November, 2022 - August, 2023

Batam, Indonesia

WIK **Manufacturing Execution System**, October, 2021 - December, 2022

Batam, Indonesia

Vechr **Vehcr IIoT Web App (Open Source)**, January, 2022 - Sep, 2022

Indonesia

ThreeSixty **paymeforms.com**, February, 2022 - July, 2022

Remote

Opex **Ivermectin Bank App Hybrid Mobile Apps**, June, 2021 - July, 2021

Remote

Opex **Enterprise Dashboard Web Application**, May, 2021 - June, 2021

Remote

Synergy **Synergy Bussines Suite Web Application**, January, 2021 - April, 2021

Bandung, Indonesia

Polman **Autonomous Mobile Robot Interface HMI WEB**, August, 2020 - September, 2020

Bandung, Indonesia

Polman **CNC Servo Controller with Digital Differential Analyzer Interpolator**, June, 2020 - August, 2020

Bandung, Indonesia

Polman **Prototype Autonomous Mobile Robot**, June, 2020 - August, 2020

Bandung, Indonesia

Loreal **Inspection and Breakdown Check Web App**, November, 2020 - December, 2020

Bandung, Indonesia

Loreal **Inspection Check Desktop App**, October, 2020 - November, 2020

Bandung, Indonesia