

# Effry Muhammad

Surabaya, Indonesia | Phone: +6288803146890 | E-mail: [eff.muhammad@gmail.com](mailto:eff.muhammad@gmail.com)

LinkedIn: [linkedin.com/in/effry-muhammad](https://www.linkedin.com/in/effry-muhammad)

Portfolio: <https://effmuhammad.github.io/>

## Professional Profile

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A Software Engineer in the Research and Development division. Has experience in various fields, including electronics and instrumentation, machine learning, computer vision, mobile application development, and internet of things. Experienced in designing and creating tools to automate manual processes. Graduated with a Bachelor of Electronics Engineering background which focuses on the application of Machine Learning for Time-Series Classification and Predictive Analytics. Entry-level data analytics professional with Google Data Analytics Professional Certification.

## Core Skills

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|------------------------|-------------------|----------------------|
| ● Mobile Apps Dev.     | ● Data Science    | ● System Automation  |
| ● Image Processing     | ● Computer Vision | ● Electronics        |
| ● AI and Deep Learning | ● Databases       | ● Instrumentation    |
| ● Python               | ● Data Analytics  | ● Internet of Things |

## Work Experiences

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### Software Engineer

PT Zenith Allmart Precisindo (ZENMED+) – Indonesia

*(January 2023 – Now)*

- Develop Computer Vision software with Python
- Develop Flutter Cross-Platform mobile and desktop applications
- Develop mobile application for medical training device and cervical cancer examination
- Develop computer vision for medical imaging especially for cervical cancer tissue automatic detection

### Freelance Developer and Tech Content Creator

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*(November 2022 – Now)*

- Develop Machine Learning and Computer Vision Software
- Develop an Internet of Things (IoT) and Mobile Applications
- Making Youtube videos about tech related contents (Python, Mobile Apps, and Robotics)

### Data Science Researcher

Politeknik Elektronika Negeri Surabaya – Indonesia

*(January 2022 – December 2022)*

- Research Group Member of Artificial Intelligent and Smart Embedded System
- Focus of research on application of Power Consumption Predictive Analytics and Anomaly Detection with Machine Learning

### Data Science Researcher

Politeknik Elektronika Negeri Surabaya – Indonesia

*(January 2022 – December 2022)*

- Research Group Member of Artificial Intelligent and Smart Embedded System

- Focus of research on application of Power Consumption Predictive Analytics and Anomaly Detection with Machine Learning

### **Electronics Engineer**

PT Sari Mas Permai – Indonesia

*(November 2020 – May 2022)*

- Lead the development of various embedded system improvements with C programming.
- Collaborate with teams from each engineering department to ensure all of factory plant is working well
- Analyze the electricity usage of each production plant

## **Freelance Project Experiences**

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### **Artificial Lift Monitoring Device with IoT and Mobile Apps Prototype**

*(April 2023 – Now)*

- Design and build an artificial lift monitoring system for crude oil production for research purpose
- Develop an internet of things embedded system with flow sensor, pressure sensor, temperature sensor, and level sensor.
- Develop mobile application with internet of thing feature

### **Self-Driving Car Simulation based on Behavioral Cloning**

*(December 2022 – March 2023)*

- Develop machine learning for self-driving car simulation with VGG16 and Nvidia Behavioral cloning method
- Real world implementation with Donkey Car based on Nvidia Jetson Nano

## **Academic Qualification**

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### **Bachelor of Applied Science (BASc) of Electronics Engineering**

Politeknik Elektronika Negeri Surabaya

*(January 2022 – Graduated in March 2023)*

CGPA: 3.76 / 4.00

Modules included:

- Artificial Intelligence for Embedded System (A)
- Image Processing (A)
- Intelligent Control (A)
- Quality Control and Industry Management (AB)
- VLSI and Logic Design (AB)

Final Project: "Single-Phase Electrical Data Logger with Long Short Term Memory (LSTM) Predictive Analytics and Web Application Interface"

### **Associate's Degree (D3) of Electronics Engineering**

Politeknik Elektronika Negeri Surabaya

*(June 2017 – November 2020)*

CGPA: 3.23 / 4.00

Modules included:

- Software Development (A)
- Electronics Instrumentation (A)
- Quality Control (AB)
- Robotics (AB)
- Medical Electronics (AB)

Final Project: "Design of Helmet with Microsleep Detection Based on Image Processing using Raspberry PI"

## Additional Information

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### Mother Tongue:

- Bahasa Indonesia

### Other Language:

- English  
E-TEFL Score: 503 (Listening: 580, Reading: 450, Structure : 480)

### Toolsets

- Programming Language: Python, Dart, Swift, Javascript, C, C++, R, SQL
- Data: Tableau, Looker Studio, RStudio, Jupyter Notebook, MySQL
- Framework: Flutter, SwiftUI, Django, Flask
- OS Environment: MacOS, Windows, Linux
- Embedded Systems: Arduino, ESP32, STM32 ARM
- Journaling: Mendeley

### Courses:

- Software Quality Assurance - Rakamin-Kominfo (*Now*)
- [Data Analytics Professional Certificate](#) - Google (*5 December 2022*)
- [Machine Learning with TensorFlow](#) - Google-Kominfo (*17 August 2022*)
- [Data Analyst Professional Academy](#) - DQLab-Kominfo (*15 April 2022*)
- [Google Cloud Platform QWIKLABS](#) - Google (*28 May 2020*)
- [Data Visualization](#) - Dicoding (*28 May 2020*)
- [Machine Learning](#) - Dicoding (*18 May 2020*)
- [Python](#) - Dicoding (*29 April 2020*)

### Achievements:

- [3<sup>rd</sup> Place in The Innovation Competition](#) - PT Medion Farma Jaya (*21 September 2020*)
- [1<sup>st</sup> Place in The Infex Cardboard Creativity Competition](#) - FSRD UNS (*2019*)

### Scholarships:

- Kaltim Stimulan Final Project Scholarship Awardee (*2020, 2022*)
- Kaltim Tuntas Scholarship Awardee (*2019-2020*)
- PPA Scholarship Awardee (*2018-2019*)