

Rayhan Kimi Nabel Athallah, S.T

Embedded System Developer

Birthdate : 25 July 2003 (22 years old)

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Profile

I'm an **Electrical Engineering** graduate minoring in **Control Engineering and Robotics**, with a deep interest in and focus on **Internet of Things (IoT)** development and **cloud computing**. My main focus are **Embedded System Development**, **Firmware Engineering**, and i'm also excel in **Back End Development** and familiar with **Machine Learning** especially in **Computer Vision** development. I have strong quality perspective for B2B tech solution.

Language : Indonesia (native), English (C1 Advanced)

Skill

- **Python** (FastAPI, PyTorch, MicroPython)
- **Firmware** (FreeRTOS, ESP-IDF, LVGL)
- **Database** (MongoDB, PostgreSQL)
- **TypeScript** (Express.js, Vue, Nuxt, Elysia.js)
- **Electronics** (KiCAD, Proteus 8)
- **DevOps** (AWS EC2, AWS S3, GCP CE, Linux, Docker, Kubernetes)
- **Internet of Things** (Mosquitto, Node RED, InfluxDB, Grafana)
- **Dev. Board** (ESP32, ESP32S3, STM32 Discovery, Raspberry Pi)

Experience

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| Edomatch B.V (5 Month)
as a Back End & AI Automation Developer | 2025 |
| PT. Timedoor Indonesia (5 Month)
as a Quality Assurance Intern | 2026 |
| Program Studi Teknik Elektro Universitas Udayana (1 Years)
as a Head of Lab Assistant | 2023 |

Organization

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|---|-------------|
| Suika Dev (2 years)
as a R&D Team (Firmware & Backend) | 2024 - 2026 |
| Himpunan Mahasiswa Elektro Universitas Udayana (2 Years)
as a Leader of R&D Division (2022 - 2023)
as a Member of Scientific Division (2021) | 2021 - 2023 |
| Kelompok Studi Robot Universitas Udayana (2 Years)
as a Member of UAV Development | 2021 - 2023 |

Education

- **S1 Teknik Elektro Universitas Udayana (Minor : Teknik Elektronika, Kendali, dan Robotika) (IPK : 3.69)** 2021 - 2025
- Participated as the Head of Lab Assistant for 1 year. (Low Voltage Lab, Microcontrollers Lab, PLC Lab, and Electronic Engineering Lab)
- Participated as Research & Development Division in Himpunan Mahasiswa Elektro Organization for 2 years. (Held PILMAPRES, managing paper publishment)

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Portfolio

2nd Winner in Lomba Karya Cipta, ELCCO National Competition 2024

as an Universitas Udayana Student, Role : Firmware Engineer

- Created a traffic detection based on Laser + Light Dependent Resistor device using ESP32.
- Able to tell street congestion level based on vehicle congestion delay in receiving laser signal from the other side. Those data sent to Firebase and can be retrieved by display device to warn people about upcoming traffic in the next street.

Funded in Bina Desa MBKM Program & Silver Award in ICIIC International

Competition 2025

as a R&D division leader of Himpanan Mahasiswa Elektro, Univ. Udayana, Role : Electrical Engineer

- Jump straight into solving climate crisis issue in Pajahan Village Tabanan, which causing coffee farmer not able to dry their coffee bean caused by high rain volume
- Created a modular solar coffee dryer technology, with a heat lock from 2 sources which are solar powered and heater powered. These system require energy which can be acquired from Solar Panel or from electric outlet.
- This is 6 month program, which we lived alongside village resident and able to communicate and educate farmer about other various agrotechnology tools. (Partnered with external organization : KOPERNIK, non profit agricultural company)

Funded in P2MW (Program Pembinaan Mahasiswa Wirausaha) MBKM 2024

as an Universitas Udayana Student, Role : Firmware Engineer

- Develop and marketed IoT agriculture monitoring device and able to reach market in farmer community in Tabanan. Built an ESP32 based monitoring system and Raspberry Pi 5 system such as soil moisture and pest detection integrated with mobile apps with leaf recognition machine learning identification (using YoLoV5s) to early - detect plant disease.
- These device consist of soil humidity monitoring, pest detector, and on site weather detection.

Capstone Project - Automatic Traffic Light Phase Controller with YoLoV5s Computer Vision Model (2025)

as an Universitas Udayana Student, Role : Software Engineer

- Upgraded version from ELCCO Competition traffic detection device
- Built an traffic detection model using YoLoV5s model integrated with Raspberry Pi 5 Device.
- Integrated with Django REST Framework backend to collect computer vision model output.
- Traffic detected values then aggregated to ESP32 device to controls traffic phase based on actual traffics that happen on that time (real - time traffic control)
- Partnered with Dinas Perhubungan Provinsi Bali for traffic data and traffic simulation variable (though not tested on a actual traffic light).

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Portfolio

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3rd Winner of 2025 IMPHNEN AI Agent Hackathon

as a member of SuikaDev Indie Developer Team, Role : Backend Developer

- Developed backend system and managing server for OCR handling to scan CV from candidates.
- Parameter that found in CV will be aggregated, and match with job scraper system which involving search from Glints and LinkedIn job opening
- Awarded as 3rd winner in IMPHNEN hackathon in August, 2025.

Edomatch Sales AI Agent Automation

as a freelancer, Role : Backend Developer & AI Automation

- Developed FastAPI based backend system and Vue based dashboard to engaging with cold leads, integrated with some of the lead generator such as Apollo.io and other lead source.
- Able to automate engaging phase with LLM email generator system, engaging for a total of 200 leads in 6 month and successfully qualified 20% of the leads that has been engaged.
- Also managing CI/CD infrastructure involving of building test cases, linting process, and build testing to ensure smooth deployment after development process

Edomatch Internal CRM (Customer Relationship Management)

as a freelancer, Role : Backend Developer & AI Automation

- Developed FastAPI based backend system and React based dashboard to manage customer in stages which are lead stage, engagement stage, and customer success stage
- Integrated with technology such as notification system integrated with discord bot system and instantly.ai as a email sending platform.
- Also managing CI/CD infrastructure involving of building test cases, linting process, and build testing to ensure smooth deployment after development process