

IKMAL AL AIS

IOT, ROBOTICS & FULL-STACK
ENGINEER

SUMMARY

Computer Engineering student at Telkom University with strong experience in IoT, embedded systems, robotics, and AI vision. Passionate about building end-to-end systems from hardware to cloud. Actively developing real industrial projects including IoT monitoring, POS systems, and ROS2-based robotics.

EDUCATION

Telkom University

Bachelor of Computer Engineering
(Ongoing)
2023 - Present (Semester 5)
GPA: 3.60 / 4.00

SMK N 1 Tegalsari

Computer and Network
Engineering
2020-2023

CERTIFICATION

ACA Alibaba Cloud Certification

Alibaba Cloud Certified Associate
2024

Dibimbing

AI Machine Learning
2025

ACTIVITIES / ORGANIZATION

Himpunan Mahasiswa Teknik Komputer (HMTK) – Telkom University

Research Division Member — 2023 – Present

- Conducted research in IoT, embedded systems, robotics, and applied AI.
- Assisted team members in designing sensors, microcontroller systems, and technical documentation.

Unit Kegiatan Mahasiswa Robotika – Telkom University

President / Team Leader (2025–2026)

- Leading the Robotics Unit focusing on autonomous systems, embedded hardware, AI vision, and competitions.
- Managing multiple technical teams (Robotics, UAV/VTOL, Mechatronics, R&D).
- Mentored members in ROS2, microcontrollers, PCB design, and robot programming.
- Oversaw project planning, hardware development, and competition preparation.

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SKILLS

Embedded & IoT: C/C++, MQTT, Microcontrollers, PCB Design

AI & CV: ROS2, OpenCV, YOLOv8

Backend & Cloud: Go, Firebase, Cloud Computing, Docker

Networking: TCP/IP, Network Security

Tools: Linux, Git, VSCode

RELEVANT COURSEWORK

- Data Structures & Algorithms
- Computer Networks
- Digital Systems
- Electronic Circuits
- Microprocessors
- Operating Systems for Real-Time
- Cloud Computing
- Artificial Intelligence
- Control Systems & Mechatronics

PROJECTS

JokoSambang POS (Go, Postgres)

Developed a real-time POS backend with printer agent, routing, and push notifications.

SmartPortCam (ROS2, YOLOv8)

Built a vehicle dimensioning system using RGB-D depth, YOLOv8 detection, and ROS2 nodes.

DeliveryBot ROS2 (Autonomous Robot)

Developed a ROS2-based autonomous indoor delivery robot integrating RealSense navigation, SLAM, and embedded motor control.

LEDPredict IoT (ESP32, Firebase)

Designed PCB + firmware + dashboard for real-time LED health monitoring.