

# Hendra Manudinata

Surabaya, Indonesia

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## SUMMARY

Undergraduate student majoring in Information Technology at Institut Teknologi Sepuluh Nopember (ITS). Creates innovative solutions with technology to solve real-world problems. Currently diving deeper into robotics and cyber security, honing skills in efficient programming technique, autonomous system, and security research.

## EDUCATION

**Institut Teknologi Sepuluh Nopember (ITS)**  
Information Technology

**Surabaya, Indonesia**  
August 2025 – Present

**SMA Negeri 1 Boyolangu**  
MIPA (Grade: 90.6)

**Tulungagung, Indonesia**  
July 2022 – May 2025

## PROFESSIONAL EXPERIENCE

### IRIS ITS

Programmer / Research Assistant

**Robotics Center, ITS Campus, Surabaya**

December 2025 – Present

- Developed object tracking software with image processing technique using OpenCV
- Utilizing various approach to accurately measure an object distance in real-life based on camera image
- Developing Neural Network system to predict the next robot's decision
- Created autonomous robot system & nodes using ROS/ROS 2 framework
- Built robot monitoring website to control & analyze robot's movement & command using Vue.js, Express.js, and ROSBridge

### Enpitsu CBT

DevOps Engineer

**Bekasi, East Java**

January 2024 – Present

- Developed Enpitsu, a Computer Based Test (CBT) application tailored for school requirements
- Optimized software design to improve application performance by 25%
- Configured and maintained Virtual Private Server (VPS) using Docker, Docker Compose, and NGINX for optimal deployment
- Automated application updates via Docker images, reducing deployment time by 30%

### NATVPS.id

Writer

**Jakarta**

May 2022 – Present

- Authored technical articles on server management, DevOps, and optimization tutorials
- Assisted the community and VPS users in learning best practices for server administration

## PROJECTS

### ROAbsen - Robotika Smaboy Attendance Machine

January 2024

Card-based attendance machine, created for SMAN 1 Boyolangu's robotics club. It utilizes ESP32 with RFID sensor & built-in Wi-Fi as client machine, and a REST API made with Flask as server endpoint to accept and process the submitted card. The parsed data is the card's Unique Identification (UID) as well as attendance time. It provides an authentication mechanism as well as automatic data export to Google Spreadsheets.

### JadwalV2

October 2024

SMAN 1 Boyolangu's schedule site for all grades (X, XI, and XII). Designed to help students see their class schedules easier by providing web UI for student and automated data import mechanism for admin to set new schedules. JadwalV2 also provides automatic WhatsApp bot notifications, ran daily to notify students about their upcoming class schedule.

Link: <https://jadwal.sman1boyolangu.sch.id>

## TECHNICAL SKILLS

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**Languages:** Python, C, C++, JavaScript

**Robotics & Embedded Systems:** ROS 2, OpenCV, ESP32, Arduino

**Android Development:** Linux Kernel, Makefile, AOSP / LineageOS

**Backend & Web:** Flask, FastAPI, Bootstrap 5, shadcn/ui

**DevOps & Tools:** Docker, Docker Compose, NGINX, Jenkins, Git, Gerrit Code Review, VS Code

## ORGANIZATIONS & VOLUNTEER

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### UKM Cyber Security ITS

*Member*

**Surabaya, Indonesia**

*September 2025 – Present*

- Participated in several Capture the Flag competitions.
- Engaged with the community and shared new knowledge with other members.

### A Renewable Agent (ARA) 7.0

*Backend Developer*

**Surabaya, Indonesia**

*September 2025 – Present*

- Developed a website to serve as the main platform for the ARA 7.0 event series using Go, Gin, and GORM.
- Designed core website structure including database, request handling, middlewares, and authentication for smooth operation and secure user access
- Collaborated across staff and divisions to reach consensus on website development
- Worked together on codebase using Git, GitHub, and ticketing system

### Ini Lho ITS! 2026

*Backend Developer*

**Surabaya, Indonesia**

*September 2025 – Present*

- Developed a website to serve as the main platform for the Ini Lho ITS! 2026 event series using Go, Gin, and GORM.
- Designed core website structure including database, request handling, middlewares, and authentication for smooth operation and secure user access
- Collaborated across staff and divisions to reach consensus on website development
- Worked together on codebase using Git, GitHub, and ticketing system

## HONORS & AWARDS

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### 2nd Winner (Runner-up) of OlimpiT - A Renewable Agent 6.0

*Issued by: Himpunan Mahasiswa Teknologi Informasi (HMIT) ITS*

*January 2025*

Cybersecurity & IoT competition involving real-world IoT project design.

### Semifinalist of Business Plan Competition - BRAND UI

*Issued by: Himpunan Mahasiswa Administrasi Niaga FIA UI*

*October 2023*

Developed "AjarinAku," a proposal for a tech-integrated education mentorship service.