

# Zhafarullah Ahmad

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## Profile Summary

- Computer Engineering student with strong skills in hardware systems, software development, and network architecture.
- Proficient in programming languages such as Python, C, and C++, with experience in embedded systems, IoT projects, image processing and machine learning.
- Enthusiastic learner, actively seeking internship opportunities to apply technical expertise and expand industry knowledge.

## Education

**Sepuluh Nopember Institute of Technology (ITS)**, Undergraduate Student in Computer Engineering 2022-Present

- GPA: 3.63/4.0
- **Coursework:** Embedded Systems, IoT design, Machine Learning, Digital Image and Video Processing, Computer Network, etc.

## Experience

**Laboratory Assistant**, Multimedia and Internet of Things (MIOT) Lab, Computer Engineering, ITS Sept 2024 – Present

- Manage and monitor the use of laboratory equipment
- Maintain MIOT social media account.

**Administrative Division**, Multimedia and Game Event X (MAGE X) March 2024 – Dec 2024

- Prepared and distributed official letters, invitations, and other communication materials.
- Assisted in the creation and distribution of certificates for participants and collaborators.
- Ensured smooth registration and verification processes for event attendees.

## Projects

**Ping Pong with ESP32 and LED dot Matrix 8x32 MAX7219** Nov 2024

[GitHub Repository](#) | [Demo Video](#)

- Developed a Ping Pong-like game with ESP32, LED dot matrix, and controlled by potentiometer.
- Tools Used: ESP32, Potentiometer, MAX7219, C++

**Gin Rummy card game with image processing and CNN for card recognition** Oct-Dec 2024

[GitHub Repository](#) | [Demo Video](#)

- Developed a Gin Rummy card game, played by a player and a bot with automatic card recognition.
- Tools Used: Python, Keras, TensorFlow, OpenCV, Pygame

**Humidity Control for Books (Team Project)** Oct-Nov 2024

[GitHub Repository](#) | [Demo Video](#)

- Built an IoT system for a box that controls the humidity for books inside.
- Tools Used: ESP32, DHT11, Mosquitto, Node-red, C++

## Technical Skills

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

**Tools and Technologies:** Node-RED, Arduino IDE, Mosquitto, Numpy, TensorFlow, Pygame

## Achievements

- Awardee Bakti BCA Scholarship 2024 Jan 2024 - Dec 2024