# Zhafarullah Ahmad

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# **Profile Summary**

- Computer Engineering student with strong skills in hardware systems and software development.
- 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 GitHub Repository | Demo Video

Oct-Dec 2024

- 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