



# AZHAR ILYAS HANIFA

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Condongcatur, Kec. Depok, Kabupaten Sleman, Daerah Istimewa Yogyakarta

I have a deep interest in programming, particularly in web development, application development, and the Internet of Things (IoT). My experience as the Head of the Programming Division at Gadjah Mada Robotic Team has sharpened my technical and leadership skills in system and software development. Additionally, I am currently developing applications using Google Cloud services and am always eager to learn and contribute to technology projects.

## Education

### Gadjah Mada University - Yogyakarta, DIY

Jul 2022 - Jul 2026 (Expected)

*Undergraduate Electronics and Instrumentation, 3.62/4.00*

- 1st Runner-up, Indonesian Robot Contest - Thematic Robot Contest Division - Regional Level 2023
- Finalist, Indonesian Robot Contest (Kontes Robot Indonesia) - National Level 2023
- Finalist, Indonesian Robot Contest (Kontes Robot Indonesia) - National Level 2024
- 3rd Winner of FORTEX National Essay Competition

### SMA Negeri 3 Cilacap - Cilacap, Jawa Tengah

Aug 2019 - Apr 2022

*High School Diploma in MIPA, 92.57/100.00*

## Experience

### Bangkit Academy - Google, GoTo, Tokopedia, Traveloka

Aug 2024 - Present

*Cloud Computing*

Bangkit Academy is a career readiness program initiated by Google, GoTo, Tokopedia, and Traveloka, designed to develop high-quality technical talent in Indonesia. I am currently participating in the Cloud Computing track, where I am acquiring essential skills in cloud infrastructure, deployment, and creating REST APIs for applications, all of which are preparing me for a successful career in cloud technologies.

- Creating REST APIs for each feature in the application.
- Researching the appropriate cloud architecture for deploying backend applications.
- Deploying the application using Google Cloud services.
- Brainstorming the application's workflow and the features within it.

### Analog Electronics - Gadjah Mada University, DIY

Aug 2024 - Dec 2024

*Lab Assistant*

An Analog Electronics Lab Assistant supports the effective operation of laboratory activities by preparing equipment and materials, guiding students during experiments, and ensuring adherence to lab protocols. We explain fundamental electronics theories, troubleshoot technical issues, and assess students' work while providing constructive feedback to enhance their understanding of analog electronics concepts.

- Execution and Support of Laboratory Activities
- Supervision and Technical Assistance
- Assessment and Academic Feedback

### Gadjah Mada Robotic Team - Gadjah Mada University, DIY

Aug 2023 - Sep 2024

*Head of Programming Division*

Gadjah Mada Robotic Team (GMRT) is a community that accommodates UGM students with an interest in robotics. In this community, I joined the H8 sub-team, which focuses on the Indonesian Thematic Robot Contest (KRTMI). KRTMI is one of the robot competition categories in the Indonesian Robot Contest (KRI), which adopts a robot theme based on national conditions and needs.

- Coordinating with other staff members regarding each staff's job description or tasks in robot development
- Conducting motion program research on robots using Arduino IDE for the software, STM32 and ESP32 for the hardware
- Researching I2C on STM32 microcontroller with ESP32
- Conducting robot vision research using OpenCV (Open Source Computer Vision) in Python programming language
- Processing vision datasheets using Machine Learning models such as YOLOv4, YOLOv5, YOLOv6, YOLOv7, YOLOv8
- Setting up Jetson Nano for vision programming needs
- Tuning each movement or motion of the waste sorting robot

### Vex International Asia-Pasific Robotics Competition - Jogja Expo Center, DIY

Dec 2023 - Jan 2024

*Volunteer*

The Asia-Pacific Robotics Championship is an international event aimed at promoting robotics education to youth in the Asia-Pacific

region. It stimulates the interest of the younger generation in Science, Technology, Engineering, and Mathematics (STEM). This competition is organized by the Asian Robotics League, which provides robotics competitions in countries and regions across the Asia-Pacific.

- Assisting the competition participants
- Informing the participants about the schedule and venue
- Directing the participants to the entrance and exit of the arena

#### **Gadjah Mada Robotic Team - Gadjah Mada University, DIY**

Sep 2022 - Aug 2023

##### *Staff Programmer*

Being part of the programming staff in the H8 sub-team, which focuses on the Indonesian Thematic Robot Contest (KRTMI).

- Conducting research on the algorithms to be used for the robot
- Creating the base program for the robot
- Testing the program on the robot using Arduino DUE, Arduino UNO, and ESP32 microcontrollers
- Tuning the PID (Proportional Integral Derivative) controller on the robot's wheels to stabilize its movement

#### **Elins Research Club - Gadjah Mada University, DIY**

Apr 2023 - Mar 2024

##### *Linux and Networking*

The Linux and Networking Division, or IoT and Software, is one of the ERC divisions focused on research in the field of IoT technology and its applications in everyday life. One of the research activities that has been and is currently being conducted by the IoT and Software Division is research on the EWS (Early Warning System) in the GConnect project, which is used to detect and provide early warnings of potential disasters in specific locations.

- Participating in Lecturer Research
- Preparing a Research Proposal on the topic of Utilizing Blockchain to Enhance Security and Efficiency in Internet of Things Data Storage. The proposal has been accepted.
- Conducting research on microcontrollers or mini PCs, specifically Raspberry Pi.

#### **Elins Research Club - Gadjah Mada University, DIY**

Apr 2024 - Present

##### *Web Development*

The Web Development Division is one of the new technical divisions focused on website development. In this division, we are responsible for updating the ERC website, including its design, features, and publication. Additionally, we are also responsible for branding the ERC design.

- Managing the Elins Research Club Website
- Researching the necessary pages (Homepage, Division, Contact, etc.)

## **Licenses & Certifications**

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- **Achievements** (2023): 1st Runner-up, Indonesian Robot Contest - Thematic Robot Contest Division - Regional Level 2023
- **Achievements** (2024): Finalist, Indonesian Robot Contest (Kontes Robot Indonesia) - National Level 2023
- **Achievements** (2024): Finalist, Indonesian Robot Contest (Kontes Robot Indonesia) - National Level 2024
- **Achievements** (2024): 3rd Winner of FORTEX National Essay Competition
- **Hard Skills** (2024): Proficient in operating Microsoft Tools and Google Tools in general, as well as having a basic understanding of several programming languages and web development, including HTML, CSS, Git, GitHub, C++, Python, Arduino, and JavaScript, along with various frameworks and libraries such as Bootstrap, Tailwind, React JS, Node JS, Express JS, and MySQL databases. Additionally, skilled in using video editing software such as KineMaster, InShot, Canva, and Figma.
- **Soft Skills** (2024): Working in teams, decision-making, problem-solving, interpersonal communication, general English proficiency, and responsibility.
- **Projects** (2024): Developing the mobile application backend by creating REST APIs for each feature of the application using Express JS and Cloud SQL for the database, and deploying the application on the services provided by Google Cloud. Creating a solar panel prototype using a light sensor. Creating a wind direction prototype using a rotary encoder sensor. Calculating the electric current value based on the color of the resistor using C++ programming language. Developing a responsive portfolio website using HTML, CSS, and JavaScript. Creating a responsive landing page website for a furniture shop using HTML, CSS, and JavaScript. Developing a landing page website for web development services using React JS, Tailwind CSS, and Vite.
- **Modules Taken** (2024): JobReady Employability Skills Wadhani Foundation
- **Webinars Attended** (2023): Sosialisasi Pencegahan Tiga Dosa Besar Pendidikan yang membahas tentang tiga masalah ('dosa') besar di perguruan tinggi antara lain yaitu intoleransi, perundungan, dan kekerasan seksual