

# AHMAD ZAKI FIRDAUS

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I am a dedicated and motivated Computer Science student in the field of Technology with a strong academic background and practical experience. Passionate about exploring the field of technology, especially in the field of Artificial Intelligence and IoT. Have experience learning C++, Python, TensorFlow, Image Processing, Object Detection. Have the ability to learn quickly. Have the ability to work together in a team proven through various collaborative projects. Committed to continuous learning and development as well as delivering excellence and exceeding expectations. I am ready to contribute to a dynamic team with a focus on achievement and goals.

## Education Level

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**Universitas Gadjah Mada - Yogyakarta, Indonesia**

Aug 2021 -

*Bachelor of Department Computer Science and Electronics, 3.80/4.00*

## Experiences

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**Himpunan Mahasiswa Elektronika dan Instrumentasi UGM - Yogyakarta, Indonesia**

Mar 2022 - Apr 2024

*Staff Kelompok Studi ELINS*

Himpunan Mahasiswa Elektronika dan Instrumentasi (HMEI) is a student organization of the Electronics and Instrumentation study program, Faculty of Mathematics and Natural Sciences, Universitas Gadjah Mada. HMEI serves as a forum for Electronics and Instrumentation students to develop creative ideas, potential, interests, and talents through activities that are carried out.

- Organized workshops and training sessions for Electronics and Instrumentation students at UGM, focusing on topics relevant to contemporary industry needs and technological advancements.
- Facilitated opportunities for freshman students to engage with competition teams at UGM, particularly in robotics and automotive sectors, fostering exploration and participation in extracurricular activities.
- Supported students in gaining practical experience and skills relevant to their academic pursuits and future career aspirations through hands-on activities and exposure to real-world challenges.

**Elins Research Club UGM - Yogyakarta, Indonesia**

Jun 2022 - Present

*Programmer*

Elins Research Club is a community of active Electronics and Instrumentation students that accommodates its members in conducting research and technology development. ERC is composed of eight divisions, namely Aeromodelling, Creation and Innovation, Robotics, Linux and Networking, Branding and Sponsorship, Public Relations, Web and Design, and Project Management.

- Hardware programmer Aeromodelling ERC

**Gadjah Mada Flying Object Research Center - Yogyakarta, Indonesia**

Dec 2022 - Dec 2023

*Hardware Programmer*

Gadjah Mada Flying Object Research Center (GAMAFORCE) is Gadjah Mada University's flying robot team engaged in unmanned aircraft (UAV) research and development.

- Developed UAV Flight Controller systems utilizing Teensy microcontrollers and programming in C++ language.
- Applied advanced C++ programming techniques to optimize the functionality and performance of the Flight Controller for unmanned aerial vehicles.
- Developed Autopilot Systems for a range of UAVs, including Quadrotors, Fixed-wing, and Hybrid VTOL plane.
- Designed and implemented a robust Flight Controller capable of stabilizing UAVs in diverse environmental conditions.
- Achievements : 1st Place KRTI 2023 for Technology Development, Flight Controller Development

**G-Connect Project - Yogyakarta, Indonesia**

Apr 2022 - Jun 2023

*Programmer*

Early Warning System (EWS) integrated with the Internet of Things (IoT) to detect in real time the occurrence of natural disasters such as floods, earthquakes, landslides, and rainfall that deployed in Imogiri, Bantul, D. I. Yogyakarta.

- Developed an IoT-based Early Warning System (EWS) utilizing various sensors to detect landslides and floods in disaster-prone areas.
- Implemented the system using C++ programming language to ensure efficient data processing and analysis.
- Integrated multiple sensors to monitor environmental parameters and detect early signs of potential disasters such as landslides and floods.

***Team Leader/Machine Learning Engineer***

Bangkit program is a career readiness program designed by Google, Tokopedia, Gojek, and Traveloka for Indonesian students who have highly interest in technology and prepare students with relevant skills for successful careers in leading technology companies, provide students with direct exposure to industry practitioners.

- Proficient in Machine Learning techniques including classification, clustering, and Deep Learning methodologies such as image processing and object detection.
- Developed an Android-based application for real-time monitoring of drivers while driving, utilizing Single Shot Detectors (SSD) MobileNetV2 method to identify signs of driver distraction or abnormal conditions such as fatigue or drowsiness.
- Demonstrated leadership skills as a team leader in a capstone project comprised of 2 machine learning engineers, 2 cloud computing engineers, and 1 mobile developer.
- Successfully coordinated and managed cross-functional team dynamics to achieve project objectives and deliverables.

## **Skills and Achievements**

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- **Hard Skills:** Python, C++, HTML, CSS, Linux, Internet of Things, TensorFlow, PyTorch, Object-Oriented Programming (OOP), ML Algorithm, Image Processing, Neural Networks, Object Detection
- **Soft Skills:** Problem Solving, Decision Making, Analytical Skills, Time Management, Attention to Details, Team Work, Quick Learner, Leadership
- **Certification** 🏆 (2024): TensorFlow Developer Certificate
- **Certification** 🏆 (2023): Machine Learning
- **Certification** 🏆 (2023): Deep Learning
- **Certification** 🏆 (2023): Computer Vision
- **Certification** 🏆 (2023): Data and Deployment