



# MUHAMMAD ABIYA MAKRUF

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Bandung, Indonesia

Master's Student in Informatics and Aspiring AI Engineer, specializing in Computer Vision and MLOps, with practical expertise in Backend Development, DevOps, and Cloud technologies.

## Experiences

### Samoedra Fashion - Temanggung, Indonesia

Jul 2025 - Sep 2025

#### Data Analyst (Freelance)

A local fashion retailer based in Temanggung seeking data-driven solutions to optimize sales and inventory management.

- Built and deployed a Power BI Dashboard for the client, successfully deriving key sales insights including top-performing items, major revenue drivers, and typical customer transaction metrics (items per transaction, average spend).

### Tarkam Analytics - Jakarta, Indonesia

Jun 2025 - Sep 2025

#### Computer Vision & Sports Data Analyst (Freelance)

An independent project focused on leveraging Computer Vision and Advanced Analytics to extract performance metrics from soccer match footage.

- Conducted data collection, manual bounding box annotation, and model experimentation using YOLOv11 on internal (VEO CAM 3) and external data sources to achieve reliable soccer object detection.
- Developed specialized 3D-to-2D trajectory code to accurately visualize player and ball movement, enabling detailed heatmap analysis crucial for tactical and performance evaluations.

### PT Toyota Astra Motor - Jakarta, Indonesia

Aug 2024 - Sep 2024

#### Data Analyst Intern

Toyota Astra Motor (TAM) is the official distributor of Toyota vehicles in Indonesia, focusing on automotive sales, service, and innovation, while implementing digital transformation across operational areas.

- Successfully developed and deployed 3 Interactive Power BI Dashboards within a 2-month period, significantly enhancing the company's capability to monitor and manage national Fixed Assets and identify corrective actions for asset movement performance, particularly within the IT division.
- Engineered and implemented advanced ETL and DAX Query processes to establish a new data pipeline, collaborating with Data Engineers to integrate data from diverse databases and ensuring asset reporting data in Power BI updated in real-time (every 15 minutes).

### Solafune Inc. - Sumida City, Japan

Apr 2024 - Jun 2024

#### AI Enginner Intern

Solafune is a geospatial technology company specializing in satellite imagery analysis for diverse sectors including agriculture, disaster response, natural resources, finance, defense, marketing, and insurance.

- Modified and optimized a YOLO-based model to accept >3 channel TIFF satellite imagery (up to 13-channel Sentinel-2 data), conducting rigorous channel combination experiments to maximize the segmentation accuracy of solar panels across diverse geographic locations.
- Engineered and deployed an integrated web-based pipeline utilizing Google Maps and Google Earth Engine (GEE) for automated satellite data retrieval and model inference, providing users with instant solar panel segmentation and supplementary weather condition reports for solar optimization forecasting.

### Bangkit Academy - Bandung, Indonesia

Feb 2024 - Jun 2024

#### Bangkit 2024 Cohort - Machine Learning Path

Bangkit Academy is a career readiness program initiated by Google, GoTo, and Traveloka. The 2024 Machine Learning path equips participants with in-demand technical and soft skills through expert-led training, project-based learning, and industry collaboration.

- Graduated with Distinction from the Machine Learning Path, demonstrating proficiency in TensorFlow and advanced ML/DL concepts.
- Selected for the Capstone Company Path, collaborating with Solafune Inc. Japan on a real-world Computer Vision project.

### Informatics Laboratory - Telkom University - Bandung, Indonesia

Sep 2022 - May 2025

#### Asisstant Practicum

Assisted in preparing and delivering lab sessions, conducting tutorials, grading practical assignments and exams, and providing hands-on academic support.

- Served as a Laboratory Assistant for 5 technical courses (Algorithms, Data Structures, Computer Networks, OOP, and Basic AI).

### Faculty of Informatics - Telkom University - Bandung, Indonesia

Sep 2022 - Jan 2026

#### Assistant Lecturer

Assisted in delivering undergraduate courses by conducting tutorials, grading assignments and exams, preparing teaching materials, and

supporting students academically.

- Lecturer Assistant for 9 diverse subjects across mathematical and computer science disciplines.

### **Digistar Class by Telkom Indonesia - Jakarta, Indonesia**

Jun 2023 - Sep 2023

#### *Digistar 2023 Graduate*

A national technology talent development program by Telkom Indonesia designed to equip students with industry-relevant hard and soft skills.

- Completed the Backend Development path, gaining proficiency in building robust, scalable APIs which is essential for deploying ML/AI models.
- Collaborating on a capstone project that is part of several different learning paths.

## **Education Level**

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### **Telkom University** - Bandung, Indonesia

Feb 2025

#### *Master of Informatics, 3.94/4.00*

- Authored two Computer Vision papers (Journal and Peer-Reviewed Conference) focusing on Plant Disease Classification and Soccer Object Detection Analytics.
- Actively volunteered in three major events: ICoICT, ICoSEIT, and the national-level GEMASTIK Competition.

### **Telkom University** - Bandung, Indonesia

Sep 2021 - Jan 2025

#### *Bachelor of Informatics, 3.96/4.00*

- Secured top placements (2nd and 4th) in two national Hackathons, developing mobile applications integrated with AI for Plant Disease and Landmark Recognition.
- Authored a research paper on Deep Learning for Apple Plant Disease, published at the ICICYTA 2024 Conference.

### **SMA Negeri 2 Bandung** - Bandung, Indonesia

Jul 2018 - Jun 2021

#### *Senior High School*

- Students with the highest average school exam scores (Science Program).

## **Organisational Experience**

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### **5th International Conference (ICICYTA) - Bandung, Indonesia**

Dec 2025 - Jan 2026

#### *Volunteer - Editorial Team*

an international hybrid conference, with a strong focus on AI, Deep Learning, and Computer Vision technologies.

- Responsible for reviewing submitted papers (accepted) to determine whether they meet IEEE criteria and making corrections if they do not meet IEEE criteria.

### **Gemastik XVIII - Bandung, Indonesia**

Oct 2025

#### *Liaison Officer*

GEMASTIK (National Student ICT Exhibition).

- Supervised a Data Mining competition focused on building Machine Learning classification models and Aksara Jawa OCR solutions.
- Provided technical support to participants on implementation issues.

### **3rd International Conference (ICoSEIT) - Bandung, Indonesia**

Sep 2025 - Oct 2025

#### *Volunteer - Editorial and Event Team*

an international hybrid conference, with a strong focus on AI, Deep Learning, and Computer Vision technologies.

- Contributed to the Editorial and Program Team by proofreading and guiding participants & session chairs

### **13th International Conference (ICOICT) - Bandung, Indonesia**

Jul 2025

#### *Volunteer - Program and Editorial Team*

an international hybrid conference, with a strong focus on AI, Deep Learning, and Computer Vision technologies.

- Contributed to the Editorial and Program Team by proofreading and guiding participants & session chairs

## **Skills, Achievements & Certificate**

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- **Achievements**  (2025): Graduated with summa cum laude honors
- **Achievements**  (2024): Distinction Graduate Bangkit Academy Machine Learning Path
- **Achievements**  (2023): 2nd Place Winner – Hackathon competition organized by KMTETI, Universitas Gadjah Mada (UGM)
- **Achievements**  (2023): Finalist (4th Place) – Hackathon competition organized by Universitas Ciputra Surabaya
- **Projects**  (2025): Developed and deployed an AI pipeline for automated video processing sports application.
- **Projects**  (2024): Built AI module that pre-processes the satellite data (sentinel-2) to accurately identify and localize solar panels.
- **Projects**  (2024): Machine learning model for text classification (Sentiment Analysis)

- **Projects** (2024): Machine learning recommendation system model using CBF and CF
- **Projects** (2023): Planties: AI-powered mobile app for plant management and disease detection.
- **Dicoding: AI Engineer Certification** (2025)
- **Dicoding: MLOps Engineer Certification** (2025)
- **Dicoding: Data Scientist Certification** (2025)
- **Dicoding: Gen AI Engineer Certification** (2025)
- **Coursera: TensorFlow Data and Deployment Specialization Certification** (2024)
- **Coursera: TensorFlow Advanced Techniques Specialization Certification** (2024)
- **Coursera: Machine Learning Specialization Certification** (2024)
- **Coursera: DeepLearning.AI TensorFlow Developer Professional Certification** (2024)
- **Deep Learning & Computer Vision:** TensorFlow, PyTorch, YOLO, Roboflow, MLflow, Dagshub
- **MLOps & Deployment:** Docker, Kubernetes, GitHub Actions, Jenkins, RunPod, Prometheus, Grafana
- **Data & BI Tools:** Power BI
- **Soft Skills:** Time management, leadership, and organizing activities