AZHAR MAULANA

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Summary

Third-year Computer Science student at Universitas Gadjah Mada. I work mostly on computer vision and prediction problems (detection, classification, tabular modelling) and build the apps around them with FastAPI and Next.js. I also design infographics, which helps when a result has to be explained to people outside the team.

Education

Universitas Gadjah Mada **Aug 2024 – Present**
Computer Science *Sleman, DIY*

- Coursework: Deep Learning, NLP, Data Science, Pattern Recognition, Genetic Algorithms

SMAN 1 Kebumen **Jul 2021 – Jul 2024**
Mathematics and Natural Science, GPA 93.23/100 *Kebumen, Jawa Tengah*

- 3rd place, OSNK Mathematics

Projects

Urban Residential Energy Prediction | *Ensemble models, SHAP*

- Placed 1st of 10 finalist teams at DICE FEST 2026 (89.40) by predicting five residential energy targets from 201 anonymised features with an ensemble of two pipelines
- Reached 0.24846 NRMSE on the private leaderboard by solving two targets exactly from data relationships, and turned SHAP findings into three policy recommendations

Gardu | *FastAPI, Gemini*

- Won 1st place at TCC Vibe Code 2026 with a safe-route app for street crime in Yogyakarta, owning the AI agents and the backend
- Built three Gemini agents, served through FastAPI, that verify reports, score area risk and check routes

Geo-Asset Intelligence | *YOLOv8-nano, green accounting*

- Won 1st place in the Bapperida Kebumen scientific article competition by pricing detected geosite damage (Rp 2,231,416 in the highest scenario) so conservation budgets can be ranked

Red-Light Violation Detection | *YOLOv11n, ByteTrack, HSV*

- Detected red-light violations at 0.78 mAP@50, with 93% light-state accuracy across morning, noon and night, using a fine-tuned YOLOv11n tracked with ByteTrack

Rice Leaf Disease Detection | *CLAHE, HSV, GLCM*

- Led a group that classified rice leaves into six conditions at 88% accuracy on 434 validation images

Experience

Data and Software Intern | *PT Waindo SpecTerra, geospatial consulting* **22 Jun – 31 Jul 2026**

- Delivered five geospatial projects in six weeks with two teammates, mostly on the backend and on getting data into the apps
- Contributed to desktop GIS tools (Terra View, SR2 with 2× Real-ESRGAN super-resolution, TCS oil palm counter on YOLOv8-nano in ONNX) and to Next.js and Leaflet web apps (Petatopo, land-cover monitor, Purworejo dashboard)

Member, Data Science and AI Division | *Omah TI UGM* **Jan 2026 – Present**

- Fine-tuned Whisper for local-dialect transcription and deployed it behind a FastAPI backend connected to a Next.js app for real-time voice-to-data processing

Staff Madya, Village Partnerships Ministry | *BEM KM FMIPA UGM* **Oct 2024 – Present**

- Designed 20+ visuals for village partnership programs and covered events at Taro Innovation Space and Srawung Ges

SNBT Tutor and Course Grader | *SainsIn, Haro Education, ECODU.ID, TutorwithDepo; UGM* **Nov 2024 – Present**

- Taught UTBK reasoning to 200+ students, recorded 150+ solution videos, and marked assignments and exams for Discrete Mathematics and Integral and Differential Equations

Honors and Awards

1st Place, DICE FEST 2026 Machine Learning Competition, HMPS Sains Data UIN RM Said 2026
1st Place, TCC Vibe Code 2026, UKM Triple-C, Univ. Trunojoyo Madura 2026
1st Place, ISECO 2026 Infographic Competition, HMTI Unsoed 2026
1st Place, Scientific Article Competition, Bapperida Kebumen 2026
4th Place (1st Honorable Mention), KIS ANAVA #20 Infographic, Himasta UGM 2026

Skills and Languages

Machine learning: PyTorch, scikit-learn, XGBoost, YOLOv8/YOLOv11, ByteTrack, SHAP, ensemble methods
Data and software: Python (pandas, PySpark), Excel, Tableau, FastAPI, Streamlit, Next.js, React, TypeScript, PyQt6, C++
Design and documents: Canva, Figma, LaTeX, Microsoft Office
Languages: Indonesian (native); English (intermediate)