

MUHAMMAD OBIN MANDALIKA

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EXPERIENCE

Flying Fish Technologies

Nov 2025 - Feb 2026

Applied AI / ML Engineering Intern

- Partnered with FFT engineers and marine-biology researchers to deliver an AI-assisted annotation tool for underwater ecological surveys, processing transect imagery at up to 30 frames/sec and reducing researcher labelling time by an estimated 20–30% on surveys of up to 50 km/day.
- Worked directly with marine biologists and FFT's technical team to translate domain requirements into the data model, and iterated the review workflow based on their feedback.
- Designed the Postgres schema and migrations storing image metadata, model predictions, and human-validated labels.

Dimensi Kreasi Nusantara

Sep 2024 - Dec 2024

Software Engineering Intern

- Developed an e-fishery mobile application in optimizing catfish farming productivity and efficiency.
- Contributed to the development of front-end and back-end systems with key features tailored to the integration between UI/UX design and user database.
- Applied agile methodologies throughout the project lifecycle, including sprint planning, code reviews, and version control with Git.

Universitas Indonesia

Feb 2024 - Jul 2024

Teaching Assistant - AI & Data Science

- Taught practical classes for approximately 100–150 students in AI, data science, and Python programming. Designed tutorial questions and assessment materials from scratch, demonstrating strong communication and the ability to share technical knowledge effectively.

LEADERSHIP

Student Science Olympiad UI 2024

May 2024 – Nov 2024

Head of Operational Division

- Led a 22-member operations team across 15 competition branches, managing planning, logistics, and cross-functional coordination. Achieved 100% operational readiness, demonstrating leadership, problem-solving, and the ability to manage complex multi-stakeholder operations.

PROJECTS

Omarine | Production Software System (Python, PostgreSQL, GCP, Docker)

- Architected and deployed a production-grade software system processing survey data at 30 frames/sec. Built the full stack: database schema, backend pipeline, quality monitoring dashboards, and cloud deployment. Demonstrates end-to-end software engineering and digital transformation of a manual process.

Time Series Forecasting | Economic Indicator Prediction (Python, R, SQL, TensorFlow)

- Applied ARIMA, SARIMAX, and neural network models to forecast monthly unemployment, inflation, and cash rate data (2011–2024). Simulated policy scenarios with exogenous variables, demonstrating the kind of predictive modelling applicable to production planning and demand forecasting.

Food Category Classification | ML & Data Analysis (Python, scikit-learn)

- Conducted end-to-end technical research: applied three ML approaches (KNN, Random Forest, K-Means) to a 1,574-item dataset, handling messy real-world data and performing rigorous model comparison. Achieved 90.5% accuracy and 0.845 macro F1.

Annota | AI-Powered Research Web App (JavaScript, Node.js, OpenAI API)

- Designed and built a full-stack web application integrating LLM API for automated text processing. Self-initiated project demonstrating independent problem-solving and the drive to build software that solves real problems.

UQonnect | Student Platform (Next.js, TypeScript)

- Built a full-stack onboarding system from user research through to deployed prototype, translating user needs into product features through surveys and interviews.

ACHIEVEMENTS

- FindIT! UGM Data Analytics Competition – Finalist (Top 10), Trained an ML model for anti-spoofing detection under competitive time constraints.
- COMPFEST Data Analytics Dash – Finalist (Top 5), Solved complex SQL queries and delivered a data analytics case study presentation to judges.

SKILLS

Software Engineering: Python, Java, JavaScript (Node.js), TypeScript, Next.js, Django, React, PostgreSQL, MySQL, Docker, GCP, Git, RESTful APIs, full-stack development, agile/Scrum

Data & Analytics: SQL (advanced), Pandas, NumPy, Matplotlib, Tableau, Power BI, statistical modelling, predictive analytics, data visualisation, time series forecasting

AI / ML: Machine learning (scikit-learn, TensorFlow), LLM integration (OpenAI API), model evaluation, prompt engineering

Professional: Analytical thinking, problem-solving, leadership (22-member team), cross-functional collaboration, technical research, communication, Bahasa Indonesia (native), English (professional proficiency)

EDUCATION

University of Queensland Feb 2025 - Jul 2026

Joint Degree - Data Science (Computer Science & Mathematics)

- UQ Global Connect Scholarship Recipient

University of Indonesia, Computer Science Jul 2022 - Dec 2025

