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Alfi Aldo
Data Scientist / MLOps Engineer

Portfolio: alfialdo.me
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TECHNICAL SKILLS

Tech Stack	Python (Advanced), C++, Git, Bash, Flask/FastAPI, OpenCV, ROS2
MLOps & Cloud	CI/CD, VertexAI, Docker, Kubernetes, Google Cloud, AWS, DVC, Terraform
Data Science	Product Recommendation, Image Processing, A/B Testing, Feature Engineering
Data Engineering	SQL, BigQuery, Airflow, Pub/Sub, ETL, Data Acquisition, Sensor Fusion (LiDAR/Camera)
Communication	English (Fluent), Korean (Intermediate), Indonesian (Native)

PROFESSIONAL EXPERIENCE

Computer Vision Researcher — Sep 2024 — Present
WicomAI Lab Kookmin University — *Seoul, South Korea*

- **Sensor Fusion Architecture:** Designed a ROS2-based multi-modal drone localization system (LiDAR, Camera), achieving high-precision depth estimation with $\pm$**11 cm error** at 20m range.
- **Performance Optimization:** Optimized real-time image processing algorithms, increasing object tracking throughput by **7x (30 FPS to 220 FPS)** to enable high-speed autonomous navigation.
- **Edge AI Deployment:** Engineered a lightweight Dynamic Convolution Encoder-Decoder model for drone instance segmentation, achieving **87% AP** on embedded edge devices.
- **Technical Leadership:** Spearheaded a research team of 5 graduate engineers, defining technical roadmaps for Point Cloud processing, Panoptic Segmentation, and SLAM technologies.

MLOps Engineer — Apr 2024 — Feb 2025
Hypefast (Largest House of Digital Native Brands in SEA) — *Jakarta, Indonesia*

- **MLOps Infrastructure:** Built the company's first end-to-end MLOps platform using **Google VertexAI, Docker, and DVC**, automating retraining pipelines and reducing model deployment time.
- **Data Platform:** Architected a data warehouse (data-lake, datamart) strategy separating raw ingestion from business logic layers for 11 distinct local brands, successfully reducing data availability from **24 hours to real-time**.
- **High-Availability Integrations:** Developed containerized microservices on **Cloud Run and Docker** to unify Open API integrations across major marketplaces (Shopee, TikTok Shop, Lazada), achieving a **99.9% uptime SLA**.
- **Pipeline Orchestration:** Engineered **20+ auto-scaling ETL pipelines** using **Airflow, BigQuery, and Pub/Sub** with built-in automated backfilling, schema validation, and real-time failure alerting mechanisms.

Data Scientist — Mar 2022 — Mar 2024
Hypefast (Largest House of Digital Native Brands in SEA) — *Jakarta, Indonesia*

- **Revenue Impact:** Developed a hybrid recommendation engine (Collaborative + Content-based) serving 11 brands, directly driving **$427k+ annualized revenue** and achieving a **3.6% Conversion Rate**.
- **Experiment & Growth:** Executed **10+ A/B tests** comparing heuristic and ML performance for **Product Recommendation** and **Smart Voucher** systems across 11 Fashion and Health & Beauty brands, presenting strategic results directly to the Board of Directors through **Metabase**.
- **Data Acquisition:** Developed an OCR extraction pipeline for shipping labels, successfully processing **500,000+ customer profiles** to fuel sales lead generation.
- **Data Scraping:** Optimized Python scrapers to harvest competitor pricing data from major e-commerce platforms, handling **hundreds of thousands** of daily requests.

Data Scientist — Sep 2021 — Jun 2022
PT PLN (Indonesia National Electricity Company) — *Jakarta, Indonesia*

- **Data Engineering:** Designed a scalable SQL database schema and Python script to ingest, clean, and standardize **millions of rows** of telemetry data from Jawa-Bali's power grid.
- **Fraud Detection System:** Built end-to-end classification pipelines to identify electricity theft, achieving a **20% actual hit rate** in field inspections and recovering lost revenue.
- **Interface Development:** Developed dashboard using **Streamlit** to visualize and analyze results of Battery Energy Storage System (BESS) algorithms.

EDUCATION

Kookmin University — Sept 2024 — July 2026 (expected)
Master of Science in Electrical Engineer (GPA: 4.43/4.5) — Seoul, South Korea

University of Indonesia — Aug 2018 — Aug 2022
Bacherlor of Engineering in Computer Engineer (GPA:3.72/4.0) — Depok, Indonesia