

Ketut Toto Suryahadinata, S.T.

Fullstack AI / Machine Learning Engineer

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SUMMARY

Senior AI/ML engineer who specializes in turning AI initiatives into impactful and seamless real world products. Six years building systems across machine learning, computer vision, and agentic platforms for aquaculture operations, fintech, and major financial institutions. Delivered: a 75% reduction in testing cycles, 90% elimination of manual analysis error, and agentic platforms now running at scale. Comfortable spanning research, full-stack development, production MLOps, and mentoring.

TECHNICAL SKILLS

Languages: Python, R, SQL, Go, TypeScript / JavaScript, Java

AI / ML: TensorFlow, PyTorch, YOLO, OpenCV, Computer Vision, RAG, LLM fine-tuning, LangChain, LangGraph, MCP, RASA, Amazon Bedrock, OpenAI API

MLOps / DevOps: MLflow, Feast, Airflow, n8n, Zapier, Docker, Kubernetes, GitHub Actions, AWS (EC2, SageMaker, Lambda, Bedrock, Lightsail), Azure, LiteLLM, Unsloth

Data & Databases: PostgreSQL, MySQL, MongoDB, SQLite, Redis, Snowflake, Amazon Redshift, DBT, Elasticsearch, Qdrant, Weaviate, Neo4j

Backend: Django, Flask, FastAPI, Fastify, Express, Celery, Laravel, CodeIgniter

Frontend: Next.js, React, Vue.js, Angular

Analytics & BI: Metabase, Tableau, Looker, SPSS

PROFESSIONAL EXPERIENCE

Senior AI Engineer · SimplifyAi

Jan 2025 – Present

Full-time · WFO, Jakarta

- Designed the retrieval strategy for a legal-document RAG system that handles thousands of documents. The approach I established is now being reused across multiple client deployments.
- Spent months on-site at a leading Indonesian bank building out their agentic-AI platform. Owned the full stack: architected FastAPI services, built integrations into LangGraph, Jira, Confluence, and their document-analysis workflows, set up guardrails, and handled all the CRUD operations so their engineering, data, and solutions teams could actually use it.
- Created a dynamic skill framework that lets non-engineers add new agent capabilities whenever they need them. No back-and-forth with engineering required. It's made iteration way faster.
- Set up monitoring and observability so we can actually see what's happening with agent runs in production and debug issues quickly.
- Now doing the same thing at a second major bank in parallel. We shipped the full platform in 6 months, faster than the first time around because we learned what actually matters to them.

Machine Learning Engineer Lead · Insignia Indonesia

Jun 2025 – Sep 2025

Full-time · Hybrid, Jakarta

- Built an MLOps pipeline for a lead-scoring system from the ground up. Set it up so the team could track experiments, version models, and manage features properly, then deployed it on their own servers so they owned the whole thing.
- Researched and figured out how to connect GenAI tools like Dify and n8n to the broader system, making automation workflows actually work together instead of being stuck in silos.
- Led a few proof-of-concept projects that turned into real tools: built an LLM-based OCR system for document processing that actually works, and created a RAG pipeline that could reason over medical images (like stool analysis) to help with diagnosis.

- Owned the entire build for an AI campaign-simulation platform and a "Chat with Your Data" tool. Handled everything myself: backend, frontend, all the integrations, set up CI/CD so the team could deploy safely, designed the database, managed credentials. Basically made sure it actually worked end-to-end.

Senior Data Scientist · PT Delos Maritim Jaya

Jun 2022 – Apr 2025

Full-time · Hybrid, Jakarta

- Delivered powerpoint-based cyclic farm reports and data-driven analysis that supported decision-making and a 30% boost in profitability.
- Developed and deployed shrimp-disease prediction models (reinforcement learning) that cut PCR testing from roughly every 15 days to 4–5 tests per 90-day cycle, producing major cost savings.
- Ran statistical testing on water-treatment effects, eliminating ineffective chemical usage and driving an estimated IDR 100B+ in savings.
- Built computer-vision systems for shrimp-stomach conditions, achieving a 90% reduction in analyst misinterpretation; a separate phytoplankton-analysis model performed ~30% better than mid-level lab analysts.
- Built RAG-based LLM tools to support expert decision-making on the farm, achieving 90% alignment between system recommendations and expert judgment.
- Built AquaSym, a farm ERP (Appsmith + Django) and an automated shrimp-PCR report-interpretation system, cutting lab analysis time ~80% with zero interpretation errors.
- Built the data pipeline (L1–L4) on Amazon Redshift and DBT, reducing data-cleaning effort for the whole data team; also contributed as Go backend and Next.js frontend developer across divisions.

Full-Stack Developer · Omdena

Aug 2022 – Nov 2022

Contract · Remote

- Built the MVP dashboard (user dashboards, Mapbox visualizations, and scoring views) in Next.js, improving user engagement ~25% through responsive UI/UX.
- Built and managed REST APIs for per-point score calculation (Fastify + Next.js serverless routes), plus MongoDB data flow and secure user authentication.

R&D Engineer · Bangun Inovasi Teknologi (BIT House)

Jun 2021 – Apr 2022

Full-time · Hybrid, Bali

- Built computer-vision systems for production use: ID-card OCR, crowd-counting for malls, face-recognition attendance, and fish counting / species recognition.
- Developed a full-stack trading-bot application (Vue.js + Django); designed and taught data-analytics bootcamp modules and mentored a national AI competition team.

Machine Learning Engineer · Omdena

Mar 2021 – Sep 2021

Contract · Remote

- Built object-detection and classification models to detect fall armyworm in African croplands from satellite imagery, supporting crop protection and food security.
- Developed an NLP conversational model (RASA) and an abuse-detection model, deployed as a Flask API on Heroku for real-time analysis.

EDUCATION

B.Eng., Geophysics Engineering · Pertamina University

2016 – 2020

CERTIFICATES

DQLab (2021): Python, SQL, and R for Data Scientist

Dicoding (2021): Machine Learning Development, Data Visualization, ML for Beginners, Python for Beginners

Course-Net (2021): Java Apps Developer