

Zia Ul Ihsan

AI & Cloud Engineer — Multi-Agent Systems & ML Engineering

+62 851 9009 7744 ✉ badr.ibn.ihsan@gmail.com 📍 Bandung, Indonesia
📄 [in/zia-ul-ihsan](https://www.linkedin.com/in/zia-ul-ihsan) 📄 github.com/ziaihsan

Profile

Final-year Informatics student at Telkom University (GPA: 3.75/4.00), currently Cloud Consultant Technical at Metrodata Electronics — building enterprise AI solutions on Google Cloud for Pertamina. Designed multi-agent systems using Google ADK and hands-on with OpenClaw (the AI agent framework Jensen Huang called “the new computer” at GTC 2026). Thesis on invoice digitization accepted at IColCT 2026 (IEEE-Scopus indexed), achieving 97.25% F1 with LayoutLMv3. Experienced in ML engineering, cloud deployment (GCP, Vertex AI, BigQuery), and shipping production-ready AI solutions.

Areas of Expertise

Multi-Agent AI Systems - ML Engineering - AI Agent Development (Google ADK, OpenClaw) - Cloud Engineering (GCP) - Computer Vision - NLP/OCR Technology - Predictive Modeling - Data Analytics - Process Automation (RPA) - Data Visualization

Experience

Cloud Consultant Technical, ([Metrodata Electronics](#)) **Bandung, Indonesia** *Feb 2026 - Present*

- Building enterprise AI solutions on Google Cloud Platform for Pertamina NRE (New & Renewable Energy)
- Designed multi-agent system using Google ADK with Risk Management, Prescriptive Maintenance, and NL2SQL agents
- Architected data pipeline with Medallion architecture (L0→L1→L2) on BigQuery; deployed services on Cloud Run with Vertex AI Search

Data Analyst Intern, ([Masjid Salman ITB](#)) **Bandung, Indonesia** *Jun 2025 - Aug 2025*

- Processed and analyzed multi-format data (CSV, Excel, HTML) using Python and Jupyter Notebook
- Built data visualizations and implemented AI models to identify causal relationships between metrics
- Delivered comprehensive analytical report with actionable insights for organizational decision-making

Competition

Representing PPTI Company, ([Nokia Corteca Brainathon](#)) **InterContinental Bali Resort** *Aug 2024 - Oct 2024*

- Received recognition award among international professionals and industry leaders
- Contributed to establishing partnership between PPTI and Nokia for fiber optic project collaboration
- Conducted market study and presented innovative concept: “Integrating Solar Power System with Nokia Corteca”

Projects

Pertamina NRE — Multi-Agent AI System, *Enterprise POC at Metrodata* *2026*

- Built production-grade multi-agent system for Pertamina’s New & Renewable Energy division using Google ADK
- Developed 3 specialized agents (Risk Management, Prescriptive Maintenance, NL2SQL) with Gemini and Vertex AI
- Architected Medallion data pipeline on BigQuery; deployed on Cloud Run with Docker containerization

AI Sales Agent — OpenClaw + Gemini, *AI Agent Development* *2026*

- Built conversational AI sales assistant on OpenClaw framework with MCP (Model Context Protocol) server
- Implemented smart product tagging via Gemini API with automated attribute classification for 6 attribute types
- Integrated WhatsApp channel with conversation session management and product search capabilities

Invoice Digitization Framework with Deep Learning, *Personal Project* *2025*

- Upgraded thesis project by implementing BERT NER (96.35% F1) and LayoutLMv3 (97.25% F1) models
- Built end-to-end ML pipeline for 11-field extraction from 200 invoice images using PyTorch and Hugging Face
- Paper accepted at [IColCT 2026](#) (IEEE-Scopus indexed); compared OCR engines (Tesseract, EasyOCR, docTR)

Crypto RSI Heatmap - AI-Powered Market Analysis, *Course Project* *2025*

- Engineered AI chatbot using Google Gemini API with dynamic prompt injection of real-time market data
- Built FastAPI backend with multi-model support, conversation history management, and error handling

Online Retail Database Analysis, SQL & Data Analytics

2025

- Analyzed 541,909+ e-commerce transactions from 4,372 customers across 38 countries using SQL
- Performed customer segmentation using RFM analysis and time-series trend analysis

Certifications

- Microsoft Certified: Azure AI Fundamentals (Sep. 2025) - [Microsoft](#)

Education

Bachelor of Informatics *Telkom University*

Bandung, Indonesia 2022 - Present

GPA: 3.75/4.00 (Expected graduation: 2026) — Relevant Courses: Generative AI, Big Data Analytics, Computer Vision, Data Visualization, Machine Learning.

Skills

- **AI Agents & Frameworks:** Google ADK, OpenClaw, MCP (Model Context Protocol), Vertex AI, Google Gemini API
- **ML & AI:** PyTorch, Hugging Face Transformers, LayoutLMv3, BERT, OpenCV, Tesseract OCR, YOLOv8
- **Cloud & Infra:** Google Cloud Platform, BigQuery, Cloud Run, Docker, Microsoft Azure
- **Programming:** Python, TypeScript, SQL, FastAPI, Next.js, Node.js, Git
- **Data:** Pandas, NumPy, Jupyter Notebook, MySQL, SQLite, Excel/xlwings

Languages

- **Indonesian** [Native]
- **English** [Intermediate] - Strong reading & listening

Interests

Building AI agent systems (OpenClaw, Google ADK, MCP) — Exploring frontier AI tools (GPT, Gemini, Claude) — Cloud architecture & deployment — Diplomatic & stakeholder communication — Community volunteering at local mosque events