

MUHAMMAD ZIDAN ARSYAD

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SUMMARY

- ML Engineer with hands-on experience building and deploying end-to-end LLM pipelines — including RAG, SFT, and CPT — for production use in government intelligence workflows.
- Led a 4-person AI team delivering a legal document analysis system using Qwen3 fine-tuned models, deployed on VPS with vLLM, serving structured daily briefs to Ministry of Communication and Digital officials.
- Proficient in Python, FastAPI, and HuggingFace; experienced across the full ML lifecycle from data collection and model training to API orchestration and cloud deployment.

EXPERIENCE

Team Lead – Artificial Intelligence Talent Factory (AITF)

Feb 2026 – Jun 2026

BPSPDM Komunikasi dan Digital and Gadjah Mada University

- Led a team of 4 engineers to design and deliver a **legal document intelligence system** for Komdigi (Indonesia's Ministry of Communication and Digital) — producing structured daily briefs to inform policy responses.
- Architected a **RAG pipeline** using text-embedding-3-large embeddings on Qdrant Cloud, enabling dense semantic search over a corpus of Indonesian legal articles and regulations.
- Fine-tuned a **Qwen3 model via SFT** (on a CPT-adapted base) using synthetic training data; the model analyzes retrieved legal documents and outputs structured JSON consumed by a downstream dashboard.
- Contributed to **Continuous Pretraining (CPT)** of the base model on domain-specific scraped legal corpora to improve in-domain knowledge before fine-tuning.
- Deployed the model to a **VPS using vLLM** for efficient inference serving; published model artifacts to HuggingFace Hub for version control and reproducibility.
- Integrated **LangSmith** for pipeline observability, tracing RAG retrieval quality and model output consistency across runs.
- Coordinated with program stakeholders on project requirements for the workflows and deliverables.

Data Science Job Simulation

Aug 2024 – Oct 2024

British Airways on Forage

- Scraped 1,000+ customer reviews from Skytrax using Python; performed sentiment analysis with NLTK and topic modeling with Gensim LDA, visualized via pyLDAvis.
- Surfaced key drivers of customer satisfaction and dissatisfaction; communicated findings with word clouds and topic summaries for stakeholder review.

Technical Consulting Job Simulation

Aug 2024 – Aug 2024

SAP USA on Forage

- Built an interactive SAP Analytics Cloud dashboard uncovering sales trends and inventory mismatches; delivered data-driven recommendations to a mock client.

Data Analytics and Data Visualization Job Simulation

Aug 2024 – Aug 2024

Accenture North America on Forage

- Cleaned and analyzed 7 datasets with Python and Excel to identify content performance trends; delivered insights via a stakeholder presentation deck and video walkthrough.

EDUCATION

Gadjah Mada University

2026 – Present

- Master of Computer Science – Artificial Intelligence
- Activity: AITF UGM

University of Indonesia

- Bachelor of Engineering – Computer Engineering
- Activity: IME FTUI, Jogjakun UI

GPA: 3.71/4.00

SKILLS

- **Programming:** Python, SQL, FastAPI, Git
- **LLM Engineering:** RAG (Qdrant, dense retrieval), SFT, CPT, vLLM (inference serving), HuggingFace Hub, LangSmith (observability), synthetic data generation
- **ML and AI:** Supervised & unsupervised learning, NLP (sentiment analysis, topic modeling, LDA), deep learning, ensemble methods, time-series forecasting (ARMA), classification, clustering (K-means, PCA)
- **Data Science:** Data wrangling, EDA, feature engineering, A/B testing, statistical modeling, predictive modeling, data visualization (Jupyter Dash, SAP Analytics Cloud)
- **Infrastructure:** VPS deployment, AWS, Azure, CI/CD basics, Qdrant Cloud

PROJECT

NLP and Text Analysis Pipeline

- Built end-to-end NLP pipelines for topic modeling, sentiment analysis, and word cloud generation on 1,500+ British Airways reviews using NLTK and Gensim; visualized findings interactively with pyLDAvis.

Forecasting and Time-Series Modeling

- Developed ARMA models to forecast PM2.5 air quality trends in Jakarta; built a FastAPI service for real-time stock volatility prediction using Alpha Vantage data.

Predictive Modeling and Classification

- Predicted earthquake building damage levels in Nepal using logistic regression and decision trees; built bankruptcy prediction models on imbalanced datasets using Random Forest and Gradient Boosting.

Clustering and Exploratory Analytics

- Segmented consumer financial data via PCA and K-means; designed an interactive Jupyter Dash dashboard for real-time predictive model parameter tuning.

CERTIFICATION & COURSEWORK

Certifications

- CCNAv7: Switching, Routing, and Wireless Essentials – Cisco (2021)
- CCNAv7: Enterprise Networking, Security, and Automation – Cisco (2022)

Courses

- Applied Data Science Lab – WorldQuant University (2023)
- Cloud Practitioner Essentials – AWS, Dicoding Indonesia (2023)
- DevOps Foundation – Dicoding Indonesia (2023)
- SQL Intermediate – Solo Learn (2023)
- Big Data Foundation Level 1 – IBM (2021)

VOLUNTEERING

Staff – Academic and Profession Division

IME FTUI – University of Indonesia

- Prepared exam materials for key Computer Engineering courses supporting 100+ first- and second-year students; coordinated department-wide forums with alumni and 30+ attendees.