

MUGNI HIDAYAH

AI ENGINEER

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SUMMARY PROFILE

AI Engineer with a strong focus on Product Engineering and Scalable Systems. Experienced in developing end-to-end intelligent applications from data pipelines to deployment on cloud infrastructure. Combines analytical rigor from a Data Science background with modern software engineering practices to deliver production-ready AI solutions.

SKILLS

- Languages: Python, SQL.
- AI & GenAI Stack: LangChain, RAG, Vector Embeddings, PyTorch, YOLOv8, Scikit-Learn.
- Backend & Security: FastAPI, SQLAlchemy, API Authentication, Rate Limiting, Secret Hashing.
- Database & Data: PostgreSQL, MySQL, Pandas, NumPy
- DevOps & Cloud: Docker, CI/CD (GitHub Actions), Cloud Deployment (Railway), Streamlit.

PROJECTS

Synapse: Instant Document Insights | Python, FastAPI, LangChain, PostgreSQL

[GitHub](#) | [Live UI](#) | [API Docs](#)

- Designed and developed a secure RAG pipeline using PostgreSQL + pgvector, deployed on Railway with CI/CD (GitHub Actions) for automated testing and deployment.
- Built a robust FastAPI (Async) service featuring API Key Authentication (SHA256), rate limiting to prevent abuse and ensure service stability.

Real-time Emotion Analytics | YOLOv8, PyTorch, OpenCV, Custom ResNet

- Built a dual-model system (YOLOv8 + Custom ResNet) achieving up to 60 FPS on GPU with 81% accuracy on FER-2013plus benchmark.
- Implemented Exponential Moving Average (EMA) smoothing to eliminate frame-by-frame prediction jitter, transforming noisy raw probabilities into consistent time-series metrics.

Pricing Optimization Engine | Python, Scikit-Learn, Docker, GitHub Actions, Pytest

- Engineered a demand elasticity model using Random Forest to simulate dynamic pricing strategies on non-linear demand curves, translating ML outputs into actionable business scenarios.
- Implemented full CI/CD pipeline with GitHub Actions, automated testing (90%+ coverage), and containerized deployment ensuring reproducible releases.

EXPERIENCE

Data Scientist Intern | PT Kereta Api Indonesia | July 2024 – August 2024

- Developed a high-performance data cleaning pipeline using Pandas vectorization, enabling the efficient processing of 1M+ transaction records and reducing data preparation latency.
- Implemented an automated text classification workflow using SVM, successfully handling extreme class imbalance across 10,000+ reviews to streamline the customer feedback loop.

EDUCATION

Telkom University | Bachelor of Data Science (GPA: 3.33 / 4.00) | 2021-2025