

Praditya Wicaksono

AI/ML Systems Engineer & RAG Architect

Semarang, Indonesia • aditwicaksono34@gmail.com • pradiyawicaksono.com
linkedin.com/in/praditya-wicaksono • github.com/aditlab-code

PROFESSIONAL SUMMARY

AI/ML Systems Engineer and Full-Stack Developer (GPA 3.96/4.00) with a proven track record of building and deploying production-grade intelligent systems. Specialized in designing high-throughput RAG architectures (Vector Search, Semantic Query Optimization), asynchronous ingestion pipelines (Task Queues, Redis), LLM API integration & structured parsing, and explainable Machine Learning (Time-Series Forecasting, SHAP XAI). Experienced in constructing resilient microservices (FastAPI, Express) and offline-first client engines.

TECHNICAL SKILLS

AI/ML & RAG Systems: PyTorch, LLM APIs, Vector Databases, Reinforcement Learning, SentenceTransformers, SHAP XAI, Time-Series Forecasting, Local RAG

Programming Languages: TypeScript, Python, Dart, SQL, JavaScript, HTML5/CSS3

Backend, Web & MLOps: Node.js, Express, Next.js 16, React 18, FastAPI, Redis, PostgreSQL Star Schema, Docker, Cloudflare Workers, Git

Languages: Indonesian (Native), English (Professional)

INTELLECTUAL PROPERTY & RESEARCH

- **MAESTRO Intelligent Tutoring System Architecture** — Official Indonesian Software Copyright (*HKI Registry*).
- **Q-POMDP Reinforcement Learning for Adaptive Pedagogical Policy Scheduling** — Accepted in *IEEE ISemantic 2026*.
- **Stock Market Prediction and Time-Series Forecasting using Multi-Head Attention** — Accepted in *IEEE ICAMIMIA 2025*.

PRODUCTION PROJECTS

Resumix AI — Private Enterprise Recruitment Platform

Next.js 14, Express, Redis Queue, Vector DB, LLM APIs

Privately hosted AI recruitment candidate screening and vector ranking platform • [\[Live Demo\]](#) • [\[GitHub\]](#) 2025 – Present

- Engineered an asynchronous background ingest pipeline achieving fast non-blocking HTTP response times and zero-text PDF short-circuiting.
- Integrated structured LLM parsing for PII-safe candidate resume extraction with 0% PII scoring bias compliance.
- Built dual-embedding vector search achieving high-precision semantic matching and explainable 4-factor scoring.

Maestro — Intelligent Tutoring System

Flutter Web, Riverpod, Reinforcement Learning, LLM APIs

Adaptive AI tutoring platform with dynamic policy scheduling • [\[Live Demo\]](#) 2024 – Present

- Developed a Reinforcement Learning policy engine with adaptive Z-score scheduling to sequence personalized student learning paths.
- Implemented localized Markdown RAG with in-memory LRU caching, cutting LLM response latency by 45% and preventing content hallucination.
- Secured official Indonesian software copyright (HKI) and deployed to Firebase Hosting.

GeoSchema Bot — Spatial Data Mining & B2B Lead Engine

TypeScript 5.5, Chrome MV3, React 18, Apache Parquet

Native Manifest V3 Chrome Extension for high-concurrency spatial data mining 2025 – Present

- Built a 100% client-side Chrome MV3 extension executing multi-pass Haversine grid sweeps on Google Maps with \$0 cloud infrastructure expense.
- Implemented concentric grid sweeping, dynamic 3x3 sub-grid zoom splicing, and FIFO async mutex data locking.
- Engineered in-browser streaming exports to Apache Parquet, Excel, CSV, and WhatsApp outreach formats.

BI Analytics & Financial Operational System

Next.js 15, PostgreSQL Star Schema, Redis, Python ML

Enterprise BI analytics dashboard and machine learning sales forecasting system 2025

- Constructed a PostgreSQL Star Schema data warehouse with an optimized Redis query caching layer for high-volume transactions.
- Developed Machine Learning pipeline featuring time-series sales forecasting and Random Forest SHAP Explainable AI (XAI).
- Integrated SHA-256 digital document signature overlays and Leaflet GIS customer density heatmaps.

EDUCATION

Universitas Dian Nuswantoro

Semarang, Indonesia

Master of Computer Science (M.Kom.), Informatics Engineering — GPA: 3.96 / 4.00

2024 – 2026

Universitas Negeri Semarang

Semarang, Indonesia

Bachelor of Education (S.Pd.), Physics

2018 – 2023